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Response To Comments On Proposed Amendments To 310 CMR 7.00 et seq.:

310 CMR 7.00: Appendix B "Emission Banking, Trading, and Averaging"

and

310 CMR 7.29 "Emissions Standards for Power Plants"

Regulatory Authority:
M.G.L. c. 111, Sections 142A through 142N

September 2006

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SUMMARY OF COMMENTS ON THE PROPOSED AMENDMENTS TO REGULATIONS 310 CMR 7.00: APPENDIX B AND 310 CMR 7.29 AND MassDEP RESPONSES

Hearings Held: Friday, January 20, 2006 in Boston, Massachusetts
Wednesday, February 15, 2006 in Salem, Massachusetts
Thursday, February 16, 2006 in Holyoke, Massachusetts
Thursday, February 16, 2006 in Sandwich, Massachusetts
Thursday, February 23, 2006 in Somerset, Massachusetts
Monday, August 21, 2006 in Boston, Massachusetts

In December of 2005, the Massachusetts Department of Environmental Protection (MassDEP) proposed amendments to regulations 310 Code of Massachusetts Regulations (CMR) 7.00: Appendix B and 310 CMR 7.29, accompanied by a Technical Support Document, regarding implementation of carbon dioxide (CO_2) emission standards for certain existing power plants in the Commonwealth. The proposed regulations would establish the detailed procedures by which affected facilities emitting CO_2 in excess of that allowed by the standards for fossil fuel fired units established at 310 CMR 7.29(5)(a)5. will demonstrate compliance by using emission reductions, avoided emissions and/or sequestered emissions.

MassDEP held six public hearings and solicited written testimony on the proposed regulation. Pursuant to Massachusetts General Laws (MGL) Chapter 30A, the hearings were held to gather comments on the proposed revisions to the State's Air Quality Control Regulations, specifically 310 CMR 7.00: Appendix B "Emission Banking, Trading, and Averaging" and 310 CMR 7.29, "Emission Standards for Power Plants." Public notices were published in two newspapers in general circulation in Massachusetts, and were sent to interested parties via electronic mail.

On November 16, 2005, notice of the proposed regulatory amendments was sent to the relevant state agencies. Notice of public hearings and an opportunity to comment on the proposed regulatory amendments was published in both the Springfield Republican and the Boston Globe on December 17, 2005. On December 20, 2005, interested parties were notified by electronic mail of the public hearings and the public comment period on the proposed amendments. On January 10, 2006, an electronic mail was sent to interested parties informing them of a revised schedule for public hearings and public comments on the proposed regulatory amendments. On January 12, 2006, notice of the revised public hearing and public comment schedule was published in the Boston Globe and the Springfield Republican. Public hearings were held on the dates and at the locations specified above and the public comment period closed on March 6, 2006.

In order to cure a procedural defect because notice of the public hearings and public comment period was not also published in the Massachusetts Register, the Department held an additional public hearing on Monday August 21, 2006, in Boston at MassDEP Headquarters. Notice of this additional public hearing and public comment period was published in the Boston Globe and the Springfield Republican on July 21, 2006. All interested parties, including the relevant state agencies, were notified of the additional public hearing and public comment period by electronic mail on July 21, 2006. Notice was published in the Massachusetts Register on August 11, 2006. The additional public comment period closed on August 31, 2006. All comments submitted at the five previous public hearings and during the previous public comment period from December 17, 2005 through March 6, 2006 are considered part of the record for the proposed regulations, and did not need to be re-submitted.

This document responds to major comments that were received during the public comment periods. MassDEP appreciates the input from those who testified at the public hearings and submitted written comments into the hearing docket. Comments are grouped according to the following categories/issues:

Proposed Changes to 310 CMR 7.29
Proposed Addition of 310 CMR 7.00: Appendix B(7) - Purpose of the regulations
Definitions
Applicability
Eligible Project Categories
Trigger for Expanded Offset Project Geographic Eligibility
Trust Trigger Price ("Safety Valve Mechanism")
Circuit Breaker Mechanism
Certification and Project Start Dates
Certification and Verification Applications
Use and Purchase of Greenhouse Gas (GHG) Credits
Other Evaluation Criteria for Certification of GHG Credits
Relationship to Regional Greenhouse Gas Initiative (RGGI)
Other Issues Raised by Commenters

Within each of the above categories, similar comments from different participants have been summarized. Given the very large number of public comments received during this process, MassDEP has organized the commenters into the following groups.

Private Citizens
Local and State Elected Officials
Environmental and Health Advocacy Groups
Electric Generation and Business Groups
Owners/Operators of Electric Generating Facilities
Other Massachusetts Agencies
Other Government Agencies

Unless there was only one commenter on a particular issue, the commenters are identified by the groups listed above.

With this grouping, MassDEP is not in any way implying that all the members of a particular group of commenters made the same comment. For instance, within the Private Citizens group, there was support for and opposition to MassDEP's proposed action. See Attachment C for a list of everyone who commented.

Responses to MassDEP Questions

In the Background Document and Technical Support Document issued with the draft regulations, MassDEP requested comments on the questions set forth below. For comments received in response to these questions, MassDEP's responses are as follows. The specific issues on which the Department requested comment are indicated in italics.

A. Proposed Changes to 310 CMR 7.29

Whether the definition of "Off-site Reduction" should be deleted from 310 CMR 7.29.

Comment: In place of the term "off-site reductions," the amendment substitutes the words "emission reductions" and "avoided emissions" and does not define either. (Edison)

Response: The intent of the original language was to differentiate between out-of-stack emission reductions and other projects that reduce, avoid, or sequester emissions that would not have otherwise occurred. MassDEP subsequently recognized that this definition was imprecise. For example, there is no real environmental difference between sulfur hexafluoride (SF_6) emission avoidance projects that occur at a power plant and those that occur off-site. Requiring projects to occur offsite does not in any way improve project integrity or performance, but may increase costs of compliance by facilities and administration by the Department. Therefore, the Department will delete the definition of "Offsite Reduction" from 310 CMR 7.29 as proposed. The Department believes that the term "emission reductions" does not require formal definition in these amendments, and notes that "avoided emissions" is defined in 310 CMR 7.00: Appendix B(7)(b).

B. Proposed Addition of 310 CMR 7.00: Appendix B(7) - Purpose of the regulations

The fact that these proposed regulations address numerous greenhouse gases (GHGs), even though regulation 310 CMR 7.29 only explicitly refers to one GHG (i.e., CO_2) and does not use the term GHG.

MassDEP received several comments commending the proposal to expand the applicability of the regulations from carbon dioxide to include recognized greenhouse gases. Comments included:

- This expansion will lead to cost-effective GHG reductions. (Owners/Operators of Electric Generating Facilities, Electric Generation and Business Groups)
- Crediting only carbon dioxide reductions would decrease the program's impact as other gases have higher global warming potentials. (Electric Generation and Business Groups)

Response: The Department concurs with the commenters and has therefore finalized the proposal to credit the reduction, avoidance, or sequestration of greenhouse gases listed by the Intergovernmental Panel on Climate Change (IPCC) in a manner consistent with their global warming potentials.

C. Definitions

1. Enforceable

Comment: Some commenters argued that the proposed term "enforceable as a practical matter" was unclear and vague. Another commenter questioned how an emission reduction activity would be enforceable through a permit or approved plan without being a requirement of that permit or approved plan. Another commenter noted that the term "enforceable as a practical matter" in the proposed amendments did not address the fact that the definition of "enforceable" in Appendix B(2) refers to enforceability by the United States Environmental Protection Agency (EPA). Another commenter stated that the burden of proving that a proposed offset is truly "enforceable" should be on the regulated party (Environmental and Health Advocacy Groups, Electric Generation and Business Groups).

Response: In response to the above comments, the term "enforceable as a practical matter" has been deleted and a new definition of "enforceable" has been added to 310 CMR 7.00: Appendix B(7)(b). The new definition refers to enforceability by the Department, not EPA. It is the Department's position that the person applying for the GHG credits has the burden of demonstrating that emission reductions, avoided emissions, or sequestered emissions are "enforceable". Emission reductions, avoided emissions, and/or sequestered emissions will only be certified or verified as GHG Credits if the Department determines that it would be able to enforce the GHG Credit approval. The Department will make this determination on a case-by-case basis as applications are reviewed. Pursuant to 310 CMR 7.00: Appendix B(7)(f), the public will have an opportunity to comment on the Department's proposed approvals, conditional approvals, and disapprovals of all applications for GHG Credit certification and verification. After the close of the public comment period for each application, the Department will issue a final decision for the particular application.

2. Permanent

Comment: Several commenters argued that the term "permanent to the maximum extent feasible" in the proposed regulatory amendments was unclear, vague, and a weakening of the existing regulations. One commenter stated that the proposed language provided a common sense approach. Another commenter noted that the term "permanent to the maximum extent feasible" in the proposed amendments did not address the fact that the definition of "permanent" in Appendix B(2) still refers to enforceability by the United States Environmental Protection Agency (EPA). (Private Citizens, Environmental and Health Advocacy Groups, Electric Generation and Business Groups).

Response: In response to the above comments, the term "permanent to the maximum extent feasible" has been deleted and a new definition of "permanent" has been added to 310 CMR 7.00: Appendix B(7)(b), that refers to enforceability by the Department, not EPA. It is the Department's position that the person applying for GHG credits has the burden of demonstrating that emission reductions, avoided emissions, or sequestered emissions are "permanent." The Department will make the determination as to whether emission reductions, avoided emissions, or sequestered emissions are "permanent" on a case-by-case basis as applications are submitted for review. Pursuant to 310 CMR 7.00: Appendix B(7)(f), the public will have an opportunity to comment on the Department's proposed approvals, conditional approvals, and disapprovals of all applications for GHG Credit certification and verification. After the close of the public comment period for each application, the Department will issue a final decision for the particular application.

The appropriate application of "permanence" to sequestration projects.

Comment: A commenter suggested that the issue of permanence for forest sequestration projects could be addressed through monitoring and reporting requirements, suggesting that a project be reported upon annually but field-verified only periodically, e.g., every five years. This commenter suggested that if a project has a decline in net carbon benefits, such a decline should be reported, just as an increase in carbon benefit would be reported. Another commenter encouraged MassDEP to explore whether there are valid, proven methods for accounting for the uncertainty inherent in afforestation – such as discounting and buying insurance – while doubting that such methods are currently mature enough for use in this program. Another commenter stated that insistence on truly permanent offsets could force innovation in the field of risk mitigation through insurance and hedging. Another commenter contended, "Project sponsors will require vendors and land owners to protect the trees via performance clauses and easements in most cases and in some cases land may be transferred to local, state or federal stewardship." (Electric Generation and Business Advocacy Groups, Environmental and Health Advocacy Groups)

Response: The Department appreciates the comments received, and will consider these ideas, the best available science, and any other available guidance when reviewing any applications for sequestration

GHG Credits. In particular, the Department is requiring that land within a sequestration project boundary be placed under a legally binding instrument such that the sequestered emissions remain captured and securely stored in perpetuity. As indicated above, pursuant to 310 CMR 7.00: Appendix B(7)(f), the public will have an opportunity to comment on the Department's proposed approvals, conditional approvals, and disapprovals of all applications for GHG Credit certification and verification, including those for sequestration projects. In addition, the Department is 1) requiring GHG Credits to be verified within two calendar years after the year of any reductions and 2) limiting GHG Credit use after 2006 and 2007 to GHG Credits which have been verified (see 310 CMR 7.00: Appendix B(7)(g)2. for the mechanisms which address use of GHG Credits in 2006 and 2007). This timing will ensure that only actual reductions are used to demonstrate compliance with 310 CMR 7.29.

3. Additional

Replacing the term "surplus" with the term "additional," as well as the proposed definition of "additional."

Comment: Some commenters supported the Department's approach with respect to the proposed definition of "additional," which was to define the term as regulatory additionality. Other commenters suggested that the definition of "additional" be expanded to include the concepts of environmental and financial additionality. Another commenter stated that the Department should retain the term "surplus" and that any reductions in GHG should receive GHG Credits, even if such reductions were required by another compliance mechanism.

Some commenters suggested that the proposed definition needed to be clarified, otherwise voluntary emission reduction projects that need permits or plan approvals for construction, installation, and/or operation would be prohibited from generating GHG Credits. Another commenter suggested that the term "additional" should allow any voluntary act, done for any purpose, which creates real and verifiable emissions reductions.

Another commenter expressed concern that the proposed definition of "additional" would reduce the number and types of existing clean energy generation projects that could generate GHG Credits, including existing small-scale hydro projects. Other commenters stated that the first sentence of the definition, as proposed, was vague and open to conflicting interpretations. (Environmental and Health Advocacy Groups, Owners/Operators of Electric Generating Facilities, Electric Generation and Business Groups).

Response: The final regulation limits the definition of "additional" to regulatory additionality, as proposed. The Department notes that the concept of environmental additionality is included in 310 CMR 7:00: Appendix B(7)(e)6.c., which allows the Department to consider the extent to which a project may be harmful to the environment or public health. The Department also notes that the concept of financial additionality is too subjective and difficult to determine on a case-by-case basis. The Department has clarified the definition by amending the language in the first sentence and by stating that the need for permits or plan approvals required to build, install or operate a voluntary project will not disqualify that project from generating GHG Credits.

The Department will rely upon the laws, regulations, etc. in effect at the time the certification application is filed when making a determination as to whether a project meets the definition of "additional." Once certified, the project is "grandfathered" for the period of time for which the project is approved, i.e., changes in laws, regulations, etc., that occur after the date of application will not affect the validity of GHG credits generated by the project.

4. Global Warming Potential

Whether it is appropriate to utilize IPCC's Third Assessment Report, or to utilize IPCC's then-current procedure (i.e., as it may be amended from time to time) for determining GWPs when assessing applications for GHG Credits.

Commenters supported the Department's decision to rely on the Intergovernmental Panel on Climate Change (IPCC) guidance for the global warming potential of greenhouse gases. There was disagreement regarding the appropriate source of IPCC guidance. Specific comments were:

- When new GWP potential numbers are accepted internationally, the MA program should adjust accordingly. (Electric Generation and Business Groups)
- The Department should use the 1996 IPCC Guidelines for National Greenhouse Gas Inventories, which is used by other GHG emissions programs. (Electric Generation and Business Groups)

Response: Greenhouse gases have a wide range of global warming potentials. It is important that these regulations recognize and respond to this fact. At this time, the Department believes that the most appropriate source of internationally accepted global warming potentials is the IPCC's Third Assessment Report (2001). This report is more appropriate than the 1996 IPCC Guidelines for National Greenhouse Gas Inventories as it reflects a more current state of science. MassDEP will utilize the global warming potential most recently calculated by the IPCC when assessing applications for GHG Credits, and will finalize the regulation as proposed in this regard.

D. Applicability

Most commenters recommended that the Department expand applicant eligibility criteria beyond the facilities regulated under 310 CMR 7.29 to include generators of greenhouse gas offsets.

- We recommend that the Department add language that also allows the owners of emissions offset projects to submit their own applications for project certification and offset verification. The project owners have working knowledge of project specifics (i.e., scope, technology, permitting, limitations, etc.) that are necessary to inform the certification and verification processes. Further, a far more vibrant and efficient market for trading emission reduction credits will be created by allowing project owners as well as affected facilities to apply for project certification and credit verification; the program will realize increased efficiency and a steady supply of credits. (Electric Generation and Business Groups)
- Offset aggregators, brokers or other entities should be allowed to file certification applications for projects, along with a commensurate application fee. Otherwise, affected facilities are forced to enter into contingent contractual arrangements with these entities and co-apply with these entities in order to seek certification. This alternative methodology, as proposed, represents a market constraint, which may drive up offset prices, which in turn will drive up costs to the consumers of the Commonwealth. (Owners/Operators of Electric Generating Facilities)
- Broadening participation under the Proposed Regulations will also incentivize additional innovation in the field of CO_2 emission reductions, thereby furthering the Department's ultimate goal of reducing CO_2 emissions in the Commonwealth. (Owners/Operators of Electric Generating Facilities)
- The regulations should permit applications for certification and verification of offsets to be submitted by potential sources of those offsets, not just by the regulated entities, because it is a necessary pre-condition to the emergence of a robust and cost-efficient offset market. (Electric Generation and Business Groups)
- As to the expansion of credits to other entities, it is unclear from MassDEP's discussion what purpose would be served by such an expansion. Further, the concern is that such an expansion could adversely affect or limit the ability of the "Affected Facilities" to acquire or develop credit-producing

projects and that such an expansion could either drive up the cost of credits or result in reducing the number of verifiable projects for such facilities, or both. In short, there does not appear to be sufficient information on which to evaluate such an expansion. Moreover, it does not appear that such an expansion would be consistent with the RGGI MOU, and thus it should not be even contemplated until Massachusetts decides whether to rejoin RGGI. (Edison)

- The current language within the proposed regulations allows the "affected facilities" to bank offset credits. This language should be expanded to allow the project owners, in addition to the affected facilities, to bank offset credits for potential future transactions. (Electric Generation and Business Groups)

Response: The Department is expanding the pool of who may apply for GHG Credit certification and verification: any person may apply. The Department agrees that allowing any person to apply should create a more robust market and decrease the price of GHG Credits. No matter who applies for certification or verification of GHG Credits, the Department will only approve those applications that have been found to meet all the criteria set forth in 310 CMR 7.29(5)(a)5. and 310 CMR 7.00: Appendix B(7). Note that verified GHG Credits can be banked by whoever holds them.

E. Eligible Project Categories

Whether certification of any type of project should be prohibited, and, if so, which project types should be prohibited, and specifically seeks comment on: nuclear uprates, new nuclear plants, early reductions by affected facilities prior to January 1, 2006, and over-compliance by affected facilities after January 1, 2006, once the CO_2 cap and rate take effect.

If over-compliance with 310 CMR 7.29 were eligible to receive GHG Credit:

1. whether such GHG Credits should only be certified and/or used in the initial years of the program, as a start-up flexibility mechanism,

2. whether compliance with both the cap and rate would be necessary before allowing over-compliance to be used to satisfy a compliance obligation,

3. whether over-compliance with the cap can be used to satisfy a rate compliance obligation, and vice versa, and

4. whether over-compliance with the rate and cap can be added and the sum used to satisfy a compliance obligation.

The Department received comments supporting and opposing limiting eligible projects:

- Any GHG emissions reduction program, including hydro uprates and energy efficiency projects, should be eligible.
- The prohibition on credits for "underwater and underground sequestration" would exclude terrestrial sequestration in soil and tree roots, as well as geologic carbon capture and sequestration.
- MassDEP should consider coal ash reuse as one of the eligible offset categories.
- Nuclear power should be eligible for offsets.
- Consider excluding the projects outlined in the MA Climate Protection Plan from being offsets.
- Nuclear power should not be eligible for offsets.
- Not allowing over-compliance is inconsistent with the definition of additional.
- Over-compliance should be creditable. Compliance with both the cap and rate should not be necessary before allowing over-compliance to be used to satisfy a compliance obligation, and over-compliance with the cap should be allowed to satisfy a rate compliance obligation, and vice versa. To the extent that the Department retains both the rate and cap obligations as simultaneous obligations in its final versions of the regulations, over-compliance with the rate and cap should be added and the sum used to satisfy a compliance obligation.
- Do not make any changes to the regulations as promulgated in 2001.

- Be as strict as possible in order to inspire creative solutions.

(Private Citizens, Environmental and Health Advocacy Groups, Electric Generation and Business Groups, Owners/Operators of Electric Generating Facilities)

Response: The 1997 Massachusetts Electricity Restructuring Act, MGL c. 164, does not consider nuclear power to be "renewable" energy. The Act is relevant as an indication of the Legislature's perspective on energy generation technologies. Nuclear power is also proscribed from receiving NO_x allowances under the Department's NO_x Budget Program[1] and SO_2 allowances under EPA's Acid Rain Program. The Department will follow these precedents and is finalizing the regulations as proposed, prohibiting nuclear generation from receiving GHG Credits.

The GHG cap provisions of 310 CMR 7.29 became effective on January 1, 2006, and the regulations being discussed here are intended to provide the framework for facilities to maintain compliance with the cap and rate provisions. As discussed below in the Response to Comments on Certification and Project Start Dates, beginning on page 17, the Department is defining January 1, 2006 as the Project Start Date as proposed. In order to be consistent with the start date for projects, the Department has determined that only reductions occurring after the 310 CMR 7.29 CO2 emissions cap takes effect should be allowed. Therefore, early reductions by affected facilities prior to January 1, 2006, will be ineligible for GHG Credits.

The prohibition on over-compliance across calendar years as a compliance approach has been finalized as proposed. Because 310 CMR 7.29 has an annual facility-wide compliance period, over-compliance by some units at a facility with multiple units will be credited within a given calendar year, such that the facility as a whole may not need to acquire additional GHG Credits for that year. In addition, the Department notes that 310 CMR 7.29(5)(a)5.c and d. contain separate CO_2 rate and cap requirements. Elimination or merging of those requirements was not open for public comment; therefore, the Department cannot revise those requirements as the result of this public hearing process.

Lastly, prohibition of GHG Credits for underground sequestration is not intended to exclude terrestrial sequestration in soil and tree roots, which is an important part of afforestation and land management projects.

Comment: Several commenters stated that renewable energy projects should be allowed to obtain credits for more than one purpose. For example, one commenter stated that offsets should be recognized for methane projects that also sell Renewable Energy Certificates. Other commenters stated that GHG Credits should be available in addition to Renewable Energy Credits. Another commenter expressed a concern that participants in the U.S. Department of Energy Policy Act of 1992 Section 1605(b) voluntary program and the U.S. EPA's Climate Leaders Program would not be able to generate GHG Credits. On the other hand, another commenter suggested prohibiting projects from generating GHG Credits while also receiving funds from a Systems Benefit Charge or while receiving Renewable Energy Credits for a Renewable Portfolio Standard. (Environmental and Health Advocacy Groups, Electric Generation and Business Groups).

Response: The Department notes that a similar issue was addressed in the Department's revision of regulation 310 CMR 7.28 *NOx Allowance Trading Program* in 2004. MassDEP's response to this issue in the June 2004 310 CMR 7.28 Response to Comments is pertinent:

[1] See *Summary of Comments and Response to Comments on Proposed Amendments to 310 CMR 7.28 NOx Allowance Trading Program to establish the Public Benefit Set Aside Allocation Process and Proposed Revisions to the State Implementation Plan for Ozone* page 4, June 2004 at http://www.mass.gov/dep/air/laws/pbsartc.doc

> While there is no prohibition in Massachusetts against a R[enewable]E[nergy]P[roject] obtaining both R[enewable]P[ortfolio]S[tandard] certificates and P[ublic]B[enefit]S[et]A[side] allowances under the applicable Massachusetts regulations, allowance holders should be aware of these issues concerning the use of both certificates and allowances and the marketing of "green" energy. Allowance holders should take note of the need to comply with the statutes and regulations cited at 310 CMR 7.28(6)(b)11.f. (Relationship to Other Laws). These include M.G.L. c. 93A, (regarding the Regulation of Business Practices for Consumer Protection); M.G.L. c. 164, (regarding the Manufacture and Sale of Gas and Electricity); 940 CMR 19.00 et seq., the regulations of the Office of the Attorney General regarding the Retail Marketing and Sale of Electricity, and 220 CMR 11.00 et seq., the Rules of the Department of Telecommunications and Energy Governing the Restructuring of the Electric Industry.[2]

The Department believes all GHG Credit applicants should be aware of this issue.

The Department notes that the language in 310 CMR 7.00: Appendix B(7)(g)3. prohibits double counting of GHG Credits. In other words, if a GHG Credit is used pursuant to 310 CMR 7.29, it may not be used in any other GHG credit program, and vice-versa, with the exception of any requirements regarding disclosure of environmental or other attributes of electricity generation. The second sentence of 310 CMR 7.00: Appendix B(7)(e)4.g.ii. voids GHG Credits used for a purpose other than those specified in 310 CMR 7.00: Appendix B(7). Merely reporting under the Section 1605(b) program or the EPA Climate Leaders Program or similar registry would not make a project ineligible to generate GHG Credits.

F. Trigger for Expanded Offset Project Geographic Eligibility

MassDEP received a range of comments regarding the initial geographic scope and its proposed expansion through an offset price trigger. Some commenters were opposed to geographic constraints, while others were opposed to geographic expansion and wanted all projects to occur within the state or region. MassDEP received comments that the trigger price was too high and that it was too low. Comments were submitted suggesting that the geographic scope should remain open once opened, while other comments suggested that the geographic scope should contract when the relevant offset trigger is no longer exceeded. Specific comments and responses follow:

General Comments Regarding Geographic Scope

- Do not allow for the geographic expansion of offset applicability as this eliminates the local health and economic co-benefits from cleaning up power plants. (Public Citizens, Environmental and Health Advocacy Groups)
- These mechanisms serve as a reasonable approach toward providing cost certainty that is a fundamental element of existing and highly successful emission reduction programs for sulfur dioxide and nitrogen oxide. (Owners/Operators of Electric Generating Facilities)
- Flexibility should extend to the location of offset projects, the type of offset projects, and the amount of offsets an affected facility may use for compliance with program emission limits. Since climate change is a global issue and CO_2 emissions do not cause local environmental or health impacts, emissions reduction offsets generated throughout the U.S. and Canada should be available to affected facilities right from the start of the program. (Electric Generation and Business Groups)
- We believe that the Department may have overestimated the quantity of available offset projects within the program's geographic boundaries. (Electric Generation and Business Groups)

[2] *Summary of Comments and Response to Comments on Proposed Amendments to 310 CMR 7.28 NOx Allowance Trading Program to establish the Public Benefit Set Aside Allocation Process and Proposed Revisions to the State Implementation Plan for Ozone* page 13, June 2004 at http://www.mass.gov/dep/air/laws/pbsartc.doc

- Offset projects should have some geographic constraints as faraway projects present problems with monitoring and enforcement. (Local and State Elected Officials, Public Citizens, Environmental and Health Advocacy Groups, Electric Generation and Business Groups)

Response: Having carefully considered the comments, MassDEP will finalize the regulations as proposed. However, since Maryland has joined RGGI and Rhode Island has not, Maryland has been added to, and Rhode Island removed from, the initial list of jurisdictions participating in carbon constraining programs. Geographic constraints will be lifted if the price trigger is reached and will not be re-imposed if the offset price falls.

The Department understands the desire for the co-benefits of local offset projects. Indeed, that is one reason why the proposed regulations initially constrain the geographic scope. However, to balance this goal with the goal of minimizing the cost of compliance, and in recognition of the virtual geographic irrelevance of greenhouse gas emissions with regard to global warming, the Department will allow the geographic constraints to be lifted from offset projects if the price trigger is reached. This will increase the availability of offsets and decrease the cost of compliance.

In addition, the Department is considering how to proceed on proposing fee regulations and funding the resources necessary to oversee monitoring and enforcement of these provisions.

Appropriate criteria that could be applied in determination of whether another jurisdiction has an approvable carbon constraining program, and whether a program might be approved for one sector but not another.

Comment: One commenter indicated that MassDEP should link to the Kyoto Protocol – Joint Implementation Program, Clean Development Mechanism, and the European Union ETS. Another commenter believes that no other jurisdiction's approval should be allowed to count in Massachusetts and that the Department must proceed with utmost care in linking to other jurisdictions. (Environmental and Health Advocacy Groups, Electric Generation and Business Groups)

Response: The Department will assess whether other carbon-constraining programs have procedures in place to ensure allowances, offsets or credits are real, additional, verifiable, permanent and enforceable as defined in the Massachusetts regulations. The Department may approve portions of other carbon-constraining programs. For example, in the case that an applicant receives MassDEP approval of a carbon constraining program's landfill gas combustion methodology, such approval is not transferable to that same carbon constraining program's SF6 capture methodology. In order for another carbon-constraining program's emissions reduction, avoidance or sequestration to be eligible for use under 310 CMR 7.29, approval must be separately sought and received for each type of project.

The appropriate offset trigger price at which to accept applications with a broader geographic scope and accept allowances and credits from other systems.

Comment:

- It is suggested to adopt the lowest trigger price possible. By allowing international offset projects and credits from other systems, the market will be kept more liquid and the compliance cost will be kept low, allowing the program to succeed. More importantly, if the true goal of the program is to reduce GHG emissions, the location of the reduction is not important. (Electric Generation and Business Groups)
- We do not feel enough information has been provided to comment other than to point out that the prices proposed are 'orders of magnitude' higher than the $1.00 floor price for offsets mentioned in

the Department's Background Document of December 2005 and question the need for the dollar figure to be so high. (Owners/Operators of Electric Generating Facilities)

- The annual Consumer Price Index adjustment to the Offset Trigger Price is unjustifiable and inappropriate. It just adds additional costs to these facilities and in turn, to consumers. (Owners/Operators of Electric Generating Facilities, Electric Generation and Business Groups)
- We are concerned about the yearly price increases through the annual Consumer Price Index adjustment. This is a backhanded attempt to raise the offsets price and should be rejected. No other MassDEP fee program (which this essentially is) has automatic escalators. Neither does the cap on wholesale electricity prices - currently at $1000 per MWH. These do not have escalator clauses because they are not appropriate. (Electric Generation and Business Groups)
- The $6.50 trigger is too low. (Public Citizens, Environmental and Health Advocacy Groups)

Response: The Massachusetts Division of Energy Resources also uses a CPI adjustment to its Alternative Compliance Payment option under the Renewable Portfolio Standard regulations (see 225 CMR 14.08(4)(a)2. at http://www.mass.gov/doer/rps/225cmr.pdf and http://www.mass.gov/doer/rps/acp06.pdf for an example of use of the CPI). Although the price triggers are not fees, CPI adjustments have been used in the Department's fee programs. In particular, MassDEP adjusted its fees a few years ago using CPI in response to a directive in the General Appropriations Act (the Commonwealth's Fiscal 2003 budget). The Massachusetts Legislature directed MassDEP to increase permit and compliance fees, authorized under section 18 of chapter 21A of the General Laws. MassDEP was required to adjust fees that had not been modified more recently than fiscal year 1997 to reflect increases in the Consumer Price Index.

As indicated on page 12 of the December 2005 Technical Support Document, RGGI modeling assumed a cost floor of $1 per ton CO_{2e}, with the estimated cost of offsets varying by category and ranging from $1 to $20 per ton CO_{2e}. $6.50 and $10 per ton of CO_{2e} are in the middle of this range of costs, not "orders of magnitude higher" as stated by one commenter.

Varied comments were received asking the Department to raise and lower the trigger price. As the Department did not receive any rationale for a specific trigger price more compelling than that laid out in the Technical Support Document, the price trigger will remain $6.50, adjusted annually according to the Consumer Price Index (CPI).

Whether, once the geographic scope has been opened world-wide, it should ever subsequently be limited back to the states participating in the development of RGGI and jurisdictions that have a carbon constraining program approved by MassDEP and, if so, under what circumstances.

Comment:

- If the scope is opened and later constrained, all work and time spent on the international market would be lost. (Electric Generation and Business Groups)
- If the geographic scope is opened and closed repeatedly, the Department will find itself dealing with insurmountable certification and verification logistics. (Owners/Operators of Electric Generating Facilities)
- If MassDEP decides to include the price trigger, the geographic scope should shrink back to the original region when the price of offsets drops back below $6.50 per ton. (Environmental and Health Advocacy Groups)

Response: The Department agrees with commenters who wrote that an ever-changing regulatory geographic scope would introduce an unmanageable level of uncertainty and confusion in the offsets marketplace. This is undesirable, as it would substantially undermine the economic benefit of expanding

the geographic scope. Therefore the geographic expansion, if it occurs, will be permanent. It will not close in response to declining GHG Credit prices.

Whether projects should be certified for different amounts of GHG Credit depending on whether the project occurs in Massachusetts, in the states participating in the development of RGGI, in the United States (US), or outside the US.

Comment: One commenter stated that if the trigger mechanism was to be included in the final regulation, the Department should consider giving less credit to out-of-state or out-of-region offsets. Another commenter suggested that if the Department intended to encourage development of projects in Massachusetts and the Northeastern US, offsets obtained from the Northeast should be given credit at a premium ratio compared to those projects outside the region. Another commenter opposed projects that occur outside the region, and expressed strong concerns about projects occurring outside of Massachusetts, and stated that any out-of-state, in-region projects should receive significantly less credit than projects located in Massachusetts. (Environmental and Health Advocacy Groups, Owners/Operators of Electric Generating Facilities).

Response: The final regulations contain a trigger mechanism which, when triggered, will allow certification of GHG Credits from emission reductions, avoided emissions, and/or sequestered emissions from projects that occur anywhere on Earth, as long as such emission reductions, avoided emissions, and/or sequestered emissions are real, additional, verifiable, permanent, and enforceable. Because GHG emissions have global impacts, once the offset trigger is reached, it is appropriate to certify and verify GHG Credits for the same value whether the project is in Massachusetts, the Northeastern United States, or outside of the Northeastern United States.

G. Trust Trigger Price ("Safety Valve Mechanism")

Comments were varied in their support of, or opposition to, many aspects of the Greenhouse Gas Expendable Trust. Some opposed its existence while others supported it. MassDEP received comments suggesting the Trust trigger price was too high and that it was too low. Commenters supported and opposed the proposed conditional re-closing of the GHG Expendable Trust. Specific comments and responses follow:

General Comments Regarding the Existence of a GHG Expendable Trust

- The safety valve mechanism as proposed by MassDEP is essential for these regulations in order to balance reasonable energy and environmental policy. (Electric Generation and Business Groups, Owners/Operators of Electric Generating Facilities)
- Utilization of a Greenhouse Gas Expendable Trust means that global warming and other pollutants would not actually be reduced, instead plant owners would just be paying a fine. (Private Citizens)
- This allows companies to buy their way out of reducing emissions. (Local and State Elected Officials)
- The trust would significantly undercut the free market aspect of the regulations by the introduction of price caps to the offset prices. (Electric Generation and Business Groups)
- Massachusetts would not see the desired level of greenhouse gas emission reductions if the Trust is utilized. (Electric Generation and Business Groups)
- The $10.00 price cap on offsets and the accompanying "Greenhouse Gas Expendable Trust" are signals to the affected power plants that they may not actually be responsible for making the full pollution reductions. The price cap will take away the incentive for power plants to invest in new, cleaner technology on-site. (Environmental and Health Advocacy Groups)
- The proposed revisions are unclear as to whether the state—and ultimately the taxpayer—will make up the difference after $10/ton to pay for offsets (which by definition would cost more than $10/ton), or if MassDEP will simply settle for fewer tons of total pollution reduction. The Expendable Trust

provides cost certainty to the facilities at the expense of reductions certainty to the environment. (Environmental and Health Advocacy Groups)

Response: Where these are first in the nation regulations, and the market for GHG Credits is just developing, a GHG Credit price backstop is a justifiable precaution. Therefore, the Department will establish the Greenhouse Gas Expendable Trust as proposed. In addition, we note the 310 CMR 7.00: Appendix B(h) provision for auditing the regulations and program in 2010 which will provide an opportunity for adjustments, as necessary.

If triggered and utilized by regulated facilities, the Department will seek to maximize the greenhouse gas offset return on the deposited funds, as required by the Trust authorizing language. The Department anticipates that only funds deposited by affected facilities for compliance purposes will be used for Trust offset projects.

The appropriate trust trigger price at which to allow payment into a GHG Expendable Trust.

Comment:

- The 7.29 rules would yield trivial increases in business operating costs. Thus, even if offset prices went well above $10 the costs to business would still be minuscule, and there is no need for a price cap that could greatly harm the goal of these regulations, namely to cut global warming emissions (Environmental and Health Advocacy Groups)
- Economic studies have generally found that reductions that cost more than $10.00/ton will be needed to reduce emissions enough to meet the Kyoto standards, so we should not be sending the message that we are unwilling to make reductions that cost more than $10.00. (Private Citizens)
- Reduce the price of a CO_2 credit paid to the GHG Expendable trust from $10 to $5 per ton. (Owners/Operators of Electric Generating Facilities)
- We are concerned about the yearly price increases — the Consumer Price Index plus 2%. This is particularly true concerning the 2% additive on the trigger for contributions to the GHG Expendable Trust, which has absolutely no practical or policy basis. No other MassDEP fee program (which this essentially is) has automatic escalators. Neither does the cap on wholesale electricity prices - currently at $1000 per MWh. These do not have escalator clauses because they are not appropriate. (Electric Generation and Business Groups)
- The CPI adder to the Offset Trigger Price and the 2% adder in addition to the CPI of the Trust Trigger Price are unjustifiable, and only add additional costs to these facilities and in turn, to consumers. (Owners/Operators of Electric Generating Facilities)

Response: Comments were received suggesting increases and decreases in the GHG Expendable Trust trigger price. The Department reaffirms its original proposal to set the trust trigger price at $10.00 per ton of CO_{2e} in 2006, adjusted annually according to the Consumer Price Index plus 2%. This ensures predictable costs to the facilities and consumers, particularly during the early stages of the program while the offset market is still developing. The escalating trigger price should encourage the long-term development of control technologies and offset projects. The Department believes that this formula properly balances environmental protection and the economic concerns of the regulated facilities, business, and consumers. For response to the use of CPI adjustments, please see the previous discussion on the offset trigger price.

Whether, once the option to pay into a GHG Expendable Trust is allowed, that option should ever subsequently be removed, and, if so, under what circumstances.

Comment: Once payment into the GHG Expendable Trust is allowed, it must be a continuing process. Not only will the use of this Trust provide cost certainty to the affected sources in terms of an upper bounds on potential carbon prices but also, it can provide a continuing funding mechanism that the Department can use to promote and implement carbon reduction projects. (Owners/Operators of Electric Generating Facilities)

Response: As discussed above, the Trust, and associated trigger price, is intended to provide a GHG price backstop. It is not intended to provide an on-going mechanism for the affected facilities to maintain compliance if the offset credit price is less than the trust trigger price. When the offset price is less than the trust trigger price, the regulated facilities will have to continue investigating offset opportunities and technologies even if few initially present themselves. We believe that this investigative process is good for the environment and good for business, as it will lead to lower cost greenhouse gas emission reductions in the long term and will lead to greater emission reductions than if the GHG Expendable Trust was permanently opened.

H. Circuit Breaker Mechanism

Whether the regulation should include a circuit breaker mechanism, or alternative mechanisms.

The Department received comments in favor of and in opposition to the circuit breaker mechanism. Specific comments include:

- We agree with the Department's recommendation on this cost control mechanism and commend them for proposing it. This is exactly the type of reasonable environmental policy that will help keep electricity prices down while at the same time addressing the desired environmental goals. (Owners/Operators of Electric Generating Facilities)
- We respectfully request that the Department allow provisions for an entity subject to 310 CMR 7.29 to submit a request to the Department to invoke this mechanism at any time, and if an entity has made such a request, and the Department has failed to act in a timely manner, it is held harmless on the true-up period. As an alternative – the true-up period is correspondingly extended. (Owners/Operators of Electric Generating Facilities)
- We do not approve of the "circuit breaker" system. (Private Citizens)
- Since there are almost no limitations on the Commissioner being able to institute the circuit breaker, an unfriendly Commissioner could cooperate with the plant owners and declare insufficiency of credits. Also, the rationale for including this mechanism is not clear when the $6.50 price trigger and the $10.00 price cap are already included. If the circuit breaker is meant only to deal with situations where the price of offsets has risen extremely quickly and MassDEP wants to expand the geographic scope of offsets immediately, then MassDEP needs to make clear that that the circuit breaker can only be used in these kinds of extreme situations. MassDEP should eliminate the circuit breaker mechanism or, at the very least, strictly limit the powers of the MassDEP Commissioner. (Environmental and Health Advocacy Groups)
- We want to say clearly and forcefully for the record that moving forward with this proposed rule as currently formulated, particularly with the circuit breaker provisions as written, would be arbitrary and capricious. (Environmental and Health Advocacy Groups)

Response: MassDEP will include the circuit breaker mechanism in the final regulation, but it will sunset on January 1, 2009. It is difficult to predict the way in which this market will evolve. To ensure that this nascent program is not rapidly made untenable through dramatic price spikes or GHG credit unavailability, the Department will maintain this circuit breaker mechanism for the initial years of the program. Facilities will begin complying with the carbon dioxide emission cap in 2006 and the rate cap in 2008. The sunset date of January 1, 2009 allows the GHG Credit market to develop for several years.

Importantly, the cap and rate limitations will have been fully implemented for one entire year prior to sunsetting the circuit breaker mechanism. The Department believes that the other safety valve mechanisms, which provide for geographic expansion and the opening of the GHG Expendable Trust, will be adequate cost safeguards after this time. As indicated in the proposed regulations, the triggering of this circuit breaker mechanism will be preceded by public notice in the Environmental Monitor and an opportunity for public comment.

I. Certification and Project Start Dates

Whether projects undertaken by the affected facilities exist which generated emission reductions, avoided emissions or sequestered emissions after the initial 310 CMR 7.29 promulgation date of May 11, 2001 and prior to 2006.

Comment: One facility indicated having undertaken a project:

- At our Somerset Station, we initiated projects as our compliance strategy for 7.29. The project involved the installation of a natural gas reburn system as well as an overfired air system. The natural gas reburn system results in the reduction of all the pollutants covered by 7.29 (SO_2, NO_x, mercury, and CO_2). The system was operational in the summer of 2004. Prior to that time, our early compliance strategy involved the management of our fuel supply, since the Station has the ability to combust a limited amount of No. 6 fuel oil. (NRG)

Response: The Department acknowledges these out-of-stack reductions at the NRG Somerset Station. As stated on page 10, the regulations are being finalized to not allow use of early reductions as a compliance approach. The Department notes that the changes discussed in the comment above will facilitate compliance with 310 CMR 7.29 in the future. No comments were received indicating that affected facilities had undertaken any off-site projects that reduced, avoided, or sequestered emissions.

The appropriate start date for GHG Credits to be eligible for certification.
Whether January 1, 2006 is an appropriate Project Start Date.

The Department received some support for its proposed start date and many suggestions for earlier, but different, project start dates. Specific comments included:

- Projects undertaken anytime before these rules are finalized must not count for pollution credit. If we are to achieve the 75-85% reductions that we need in order to avoid the worst global impacts, we cannot waste money by paying power companies to do things that they are already doing. (Environmental and Health Advocacy Groups)
- We believe that the proposed certification and project start date of January 1, 2006 will likely result in an inadequate pool of eligible offset projects, which will undermine the effectiveness of the program. (Electric Generation and Business Groups)
- It would be counterproductive to establish program requirements that both exclude desirable projects with truly additional emission reductions, and also penalize project owners or affected facilities that took early action to reduce emissions in anticipation of this program. We urge the Department to revise the rule to incorporate an earlier project start date. (Electric Generation and Business Groups)
- We recommend the Department consider an alternate certification and project start date that is linked either to the emissions baseline period for the program, or to the program's promulgation date. Given that the annual CO_2 emission caps set for each of the six regulated facilities were derived from the average of their 1997, 1998, and 1999 CO_2 emissions, it would be wholly appropriate to use January 1, 2000 -- the close of the emissions baseline period, as the certification and start date for eligible offset projects. Alternatively, May 11, 2001, the initial promulgation date of 310 CMR 7.29, is another reasonable certification and project start date. (Electric Generation and Business Groups)

- The January 1, 2006 time restriction is simply unworkable, then again, we are not aware of any offset projects that currently meet that date criteria along with other specified criteria. Currently, Dominion has not been able to find any offsets in the market that meet this time constraint. As mentioned before, offset projects take several years for development. Therefore, projects and credits should count back to the earliest historical baseline cap date of January 1997. (Owners/Operators of Electric Generating Facilities)
- We suggest a project start date no later than January 1, 2001, but believe a more appropriate date is one that coincides with commencement of new facilities criteria for Massachusetts' Renewable Portfolio Standards – January 1, 1998. The MassDEP's concern that Emissions Benefits that occurred before January 1, 2006 would be used by affected facilities in contravention of the intended purpose of the Proposed GHG credit program may be alleviated by explicitly providing that only GHG Credits for emissions benefits created on or after January 1, 2006 may be used by affected facilities to comply with their new requirements. (Owners/Operators of Electric Generating Facilities)
- The language proposed at 310 CMR 7.00: Appendix B(7)(d)7. indicates that an eligible offset must "occur on or after January 1, 2006." Yet the language proposed at 310 CMR 7.00: Appendix B(7)(d)8. indicates that the project generating the offset must "be built and generating energy (in the case of certain avoided emissions), or built and in use, or installed and operational (in the case of emission reductions or sequestered emissions) by January 1, 2006." Taken together, as separate criteria, no offsets would ever be able to be certified or verified, given these time constraints. We are sure this was not the Department's intent and suggest that the word "by" in section 8. be replaced with "on or after." (Owners/Operators of Electric Generating Facilities)
- Affected sources will only be able to enter into any kind of carbon credit purchase contract once the regulatory revisions are issued, presumably in Spring 2006. Assuming the regulations are finalized by May 1, 2006, and adding two months to negotiate and finalize a contract, followed by approximately two months for the preparation and submittal of a carbon credit approval application to the Department, it could be September before the application is filed. This is nine months into the first compliance period, and a source will still not have certainty that the credits will be verified and certified. Since the credit application would be for projects post-January 1, 2006, the certification process cannot begin until early 2007, the same time frame as the first compliance report. The Department should allow the certification of carbon credits from projects that were in existence as of May 11, 2001, the promulgation date of the 7.29 regulations. The commenter stated that by using the May 2001 date, the affected facilities would be able to start negotiations with sources that may have generated credits and would be able to obtain data on the number of credits that have been created to determine if there is a sufficient inventory to meet the requirements of 310 CMR 7.29. (NRG)
- One commenter argued that for projects that were in existence prior to May 11, 2001, the Department could certify credits from those projects if certain criteria were applied to the certification methodology. (Owners/Operators of Electric Generating Facilities)
- Offsets should be allowed for any landfill gas, anaerobic digester, or other methane utilization project capturing and destroying methane on a contemporaneous basis with the carbon emissions they would be offsetting – irrespective of when those methane projects have gone into service (assuming they meet the "regulatory additionality" standard). (Electric Generation and Business Groups)
- The start date for otherwise qualifying projects should be immaterial – as long as the emissions reductions are contemporaneous with the excess emissions being offset. If, irrespective of that comment, the final rule contains an "on or after" Project Start Date for qualifying projects, that date should be no later than May 11, 2001, the initial date of promulgation of 310 CMR 7.29. (Electric Generation and Business Groups)

Response: Having considered the many potential start dates, the Department is retaining its original proposal for January 1, 2006. The Department believes that GHG Credits will become available as the market matures. The three safety triggers should allow regulated entities to avoid price spikes caused by

GHG Credit unavailability. Given the complexity of creating offsets and the lack of experience with determining the validity of credits, the Department believes that only projects begun after the 310 CMR 7.29 CO_2 emissions cap takes effect should be allowed. This would allow applicants to propose, and the Department to review and approve, projects which fit into the regulatory framework, and not have to interpret or reinterpret previous activities to make them fit. Therefore, the Department is defining January 1, 2006 as the Project Start Date as proposed. Commenters are correct that "by January 1, 2006" in 310 CMR 7.00: Appendix B(7)(d)8 was intended to be "on or after January 1, 2006." The language in the final regulation has been corrected.

J. Certification and Verification Applications

Whether 5000 tons is an appropriate threshold for certification.

Comment: One commenter asked whether the 5,000 ton threshold is per year, or over the life of the project. Other commenters suggested that the threshold should be smaller, or that there should be no threshold. Commenters also suggested that the Department allow consolidation of projects performed by one entity or source, or that multiple small projects be allowed to be aggregated to meet the threshold. (Environmental and Health Advocacy Groups, Electric Generation and Business Groups, Owners/Operators of Electric Generating Facilities)

Response: Because the final regulations allow anyone to apply to the Department for certification and verification of GHG Credits, the Department expects to receive more applications than if only the affected facilities could apply. Therefore, the Department believes it is even more appropriate to maintain the minimum size of GHG Credit certification applications as proposed, given the resources necessary to review the applications. The 5,000 ton threshold is an average annual quantity over the time period for which the applicant chooses to apply, not the total tons over the life of a project or the aggregation of separate applications. Thus, if an applicant applies for certification of one year of a project's reductions, the minimum application would be for 5,000 tons CO_{2e} in total; if an applicant applies for certification of two years of a project's reductions, the minimum application would be for 10,000 tons CO_{2e} in total, regardless of how many tons are ultimately reduced in each year; and so on. Please note, if a project is initially certified for ≥5,000 GHG Credits, verification applications will be accepted for any actual quantity reduced, avoided or sequestered, even if the verification application in a given year is for less than 5,000 tons. Accepting verification applications for any quantity of GHG Credits is appropriate, since less Department effort will be required for verification than for the initial certification process.

Aggregation of projects of a common type into a single certification application may be reasonable; however, it would not be appropriate to aggregate sequestration projects occurring in widely separated locations, or to aggregate different types of projects or to aggregate projects avoiding emissions in different power pools (because the appropriate rate at which to approve GHG Credits may differ across power pools). The Department is developing certification and verification application forms, and will be available to discuss specific aggregation proposals with applicants.

K. Use and Purchase of GHG Credits

Whether, if fewer GHG Credits are verified than originally certified and used for 2006 and 2007, to require some greater amount of verified credits, such as twice the shortfall in GHG Credits.

Comment: One commenter stated the Department does not have an adequate compensation mechanism for non-complying or failed projects. Another commenter stated that this issue could be easily addressed if the Department approved the use of carbon reduction credits based on operations and projects post-May 11, 2001. Yet another commenter stated that projects with a decline in net carbon benefits must report that. (Electric Generation and Business Groups, Owners/Operators of Electric Generating Facilities)

Response: In the case where GHG Credits are voided after they have been used by an affected facility, language has been added to require affected facilities to provide GHG Credits in an amount equal to the used, voided GHG Credits within one year of the date that the GHG Credits were determined by MassDEP to be void. As the affected facility might have used such GHG Credits in good faith, the Department will require that the environment be "made whole" through submittal of one GHG Credit for every one GHG Credit used and subsequently found to be void. Similarly, one GHG Credit will be required for GHG Credits certified and used but not verified in 2006 and 2007. The Department is also 1) requiring GHG Credits to be verified within two calendar years after the year of any reductions and 2) limiting GHG Credit use after 2006 and 2007 to only GHG Credits which have been verified. This timing will ensure that only actual reductions are used to demonstrate compliance with 310 CMR 7.29. With respect to voided GHG Credits, the Department reserves the right to enforce violations of the regulations against the affected facility, any person who applied for certification or verification of GHG Credits, or any combination thereof.

L. Other Evaluation Criteria for Certification of GHG Credits

Whether there are application evaluation criteria, perhaps specific to the project, that are not subsumed by the requirements to be real, additional, verifiable, permanent to the maximum extent feasible and enforceable as a practical matter.

MassDEP received several comments asking for a strengthening of the offset project criteria. We also received comments asking for a normalization of the application methodologies with those soon to be found in RGGI. Specific comments include:

- We recommend that any pilot program strongly emphasize the concept of "quality" as a core component. It is essential that the regulators and other stakeholders have confidence in the offsets generated by projects. (Electric Generation and Business Groups)
- The draft regulation specifies that MassDEP will void credits that have been undermined by leakage. MassDEP should consider strengthening this language by stating that the Department will reject applications outright where there is a reasonable concern that leakage will happen. (Environmental and Health Advocacy Groups)
- The regulation states that "[MassDEP] may consider scientific uncertainty and the extent to which a project may be harmful to the environment or public health when certifying or verifying GHG Credits." MassDEP should not only have the choice of considering uncertainty, the environment, and public health, but also the obligation to consider them. (Environmental and Health Advocacy Groups)
- We recommend integrating the Proposed Regulations with RGGI to the extent feasible with respect to the scope of emissions that are deemed "CO_2 equivalent." (Owners/Operators of Electric Generating Facilities)

Response: The Department believes that its regulations as finalized will ensure the quality of reduced, avoided and sequestered greenhouse gases in a way that appropriately balances environmental certainty, administrative feasibility, and economic rationality. Therefore, the Department is retaining the proposed language regarding leakage, scientific uncertainty, the environment and public health. The Department expects to normalize its GHG Credit calculation methodologies with those employed by other reputable entities. Therefore, the Department will evaluate any relevant RGGI methodologies when finalized.

M. Relationship to RGGI

Whether the CO_2 provisions of 310 CMR 7.29 should be replaced by RGGI, if and when RGGI is launched.

Comment: Some commenters suggested that the Department's regulations be drafted in a manner as similar as possible to RGGI. Some commenters expressed concern about the fate of offsets/GHG Credits approved by the Department if Massachusetts were to join RGGI. One commenter inquired as to what would happen to the price triggers if Massachusetts joins RGGI. One commenter stated that the Massachusetts proposal is better than RGGI, because its requirements take effect years before RGGI will take effect, if at all. Another commenter suggested that, when RGGI becomes effective, a study should be conducted comparing the RGGI provisions and the success of the Massachusetts program and that, upon completion of the study, a determination could be made as to whether the RGGI provisions would be adopted in Massachusetts. Another commenter suggested that the Department's regulations should automatically "sunset" when RGGI takes effect. (Environmental and Health Advocacy Groups, Owners/Operators of Electric Generating Facilities, Electric Generation and Business Groups).

Response: If and when the RGGI program takes effect and if Massachusetts decides to join, these and many other issues will need to be addressed. The Department will initiate a public discussion at that time.

Other Issues Raised by Commenters

In the Background Document and Technical Support Document issued with the draft regulation, MassDEP requested comments on the questions set forth above. For those comments received on other issues, MassDEP's responses are as follows.

A. Confidential Business Information

Comment: We hope it is the Department's intention to safeguard the identity of the parties to bi-lateral offset transactions. Even if transaction quantities and prices need to be disclosed for purposes of program monitoring and evaluation, we believe it should not be necessary for the counterparties to each discrete transaction to be identified. Other financial markets function routinely and effectively without any such disclosure. (Electric Generation and Business Groups)

Response: The Department intends to safeguard the identity of parties to bi-lateral offset transactions to the maximum extent possible, consistent with the Department's compliance with public disclosure statutes and 310 CMR 3.00, *et seq.*, the Department's regulations governing disclosure of public records. 310 CMR 3.12 provides that "[w]henever there is a doubt, question or dispute about whether particular records are subject to disclosure as public records or exempt from disclosure, there shall be a presumption that the records in question are public records. This presumption may be overcome upon a specific showing by the person requesting confidentiality that the records in question are trade secrets, or are otherwise exempt from disclosure." Requests that information be treated as confidential as a trade secret or otherwise must be submitted in writing in accordance with the provisions set forth in 310 CMR 3.00, *et seq.*

At this time, the Department intends to disclose GHG Credit information in a manner similar to that employed for the existing Appendix B banking program, i.e., the Department intends to disclose information regarding GHG Credit generation and use upon request. Due to the inclusion of various price triggers in this regulation, price data will also be disclosed under certain circumstances. For example, the price of applied-for GHG Credits will be disclosed as part of the public hearing process, again consistent with public disclosure statutes and 310 CMR 3.00, *et seq*. To protect the anonymity of parties, price data will be separated from GHG Credit transfers to the maximum extent feasible. While the release of price data will not directly identify involved parties, this information could be deduced from the GHG Credit generation and use databases if there is only one project and only one purchaser in the relevant time period.

B. Methane/Landfill Gas

Comment: One commenter argued that projects should be able to obtain credit for methane emission reductions and for offsetting emissions from fossil fuel generated electricity. One commenter suggested that while landfill operators who are under a legal obligation to avoid certain emissions should not be qualified to claim GHG Credits, the generator that uses landfill gases to produce electricity should be eligible to generate GHG Credits. (Electric Generation and Business Groups, Owners/Operators of Electric Generating Facilities)

Response: The Department agrees that it is appropriate to encourage both methane combustion to CO_2 and avoidance of electric grid CO_2 emissions by generating electricity. Therefore, an applicant that flares landfill methane and receives 22 GHG Credits for every ton of methane flared to CO_2 (using the methane global warming potential of 23) may be encouraged to instead combust the methane in electricity-generating equipment by receiving further GHG Credits for the avoidance of electric grid CO_2 emissions.

In any case, the applicant must comply with all statutes and regulations of the Commonwealth, as discussed previously on page 11. In assessing any applications for GHG Credits, the Department will consider the best available science and any other available guidance. As indicated previously, pursuant to 310 CMR 7.00: Appendix B(7)(f), the public will have an opportunity to comment on the Department's proposed approvals, conditional approvals, and disapprovals of all applications for GHG Credit certification and verification, including those for methane projects.

As to whether the landfill operator or generator should be eligible to apply for GHG Credits for avoided emissions, 310 CMR 7.00: Appendix B(7)(e)4.e. requires the application to be submitted and signed by a responsible official having the legal authority to bind the applicant. The specific entity with such legal authority must be determined by the parties involved.

C. Role of the DTE

Comment: One commenter stated that, under the regulations as proposed, the Department of Telecommunications and Energy (DTE) will not be sufficiently involved in the implementation of the program. This commenter suggested that DTE should be the decision maker with respect to safety valves and trigger mechanisms. This commenter also suggested that DTE be appointed the trustee of any trust established by the regulations. (Electric Generation and Business Groups)

Response: The DTE has the authority to approve or disapprove long-term contracts between gas/electric companies and generators/suppliers of power with respect to the quality and the rates, prices, and charges of the gas or electricity. The DTE is also "authorized and directed to oversee quality and reliability of service" (M.G.L. Chapter 164, Section 1F). Presumably, however, GHG Credits will be generated from projects or entities that are not under the jurisdiction of DTE or under limited DTE jurisdiction. Because the DTE has limited jurisdiction or authority over the owners of the Affected Facilities and the generators of GHG Credits, it is the Department's view that DTE's role in this program should not be expanded beyond the consultation role provided for in 310 CMR 7.29(6)(b)8.

Comment: Having DTE implement the Safety Valves reflects the spirit of the Department's enabling legislation for the Proposed Regulations, which compels the Department to involve DTE in efforts that affect electric-system suppliers. See M.G.L. ch. 111 § 142N (requiring the Department to consult with DTE when promulgating rules and regulations that adopt or implement emissions standards for fossil fuel-fired electric generation facilities.) (Electric Generation and Business Groups)

Response: As stated in the April 2001 Response to Comments document for 310 CMR 7.29, "DEP disagrees that in promulgating this rule it is acting in conflict with the Restructuring Act. DEP thinks that

M.G.L. c. 111 Section 142N does not in any way negate or erode DEP's authority to control pollutant emissions from power plants in Massachusetts under sections 142A through 142E."

D. Science and Health Effects of Global Warming

Comment: Many commenters submitted references to scientific studies documenting the causes and effects of GHG emissions and global warming. Many commenters reported cases of various illnesses (asthma, cancer) in their family or friends that they believe may be caused by or exacerbated by air emissions from power plants. Other commenters reported no such illnesses, even when family members lived within close proximity to the plant for a number of years. (Private Citizens)

Response: MassDEP appreciates receiving information about the science of climate change, and has been long concerned about the issue, as documented in the April 2001 *Statement of Reasons and Response to Comments for 310 CMR 7.29-Emission Standards for Power Plants*[3] and December 2005 *Background Document and Technical Support For Public Hearings on Proposed Amendments to 310 CMR 7.00 et seq.: 310 CMR 7.00: Appendix B "Emission Banking, Trading, and Averaging" and 310 CMR 7.29 "Emissions Standards for Power Plants."*[4] The completion of these regulations allows the Commonwealth to continue to address the important issue of climate change. In addition, MassDEP appreciates the openness with which many people have testified as to this information. While anecdotal information cannot be the basis of this regulation, the Department can consider scientific studies when finalizing these regulations.

E. Electric Reliability and Fuel Diversity

Comment: One commenter strongly supported the "safety valve" mechanisms as proposed by the Department as a way to ensure the cost-effectiveness and reliability of electricity. This commenter stated that if the affected facilities could not obtain offsets at a manageable price, they would either be forced to raise their prices or choose not to operate, requiring more expensive units to take their place. This same commenter stated that the proposed regulations might have a negative impact on fuel diversity in Massachusetts and New England because the affected facilities "represent almost the entire non-gas power generation fleet in Massachusetts." To address the fuel diversity issue, the commenter requested that offsets be unrestricted as to their location and type. Another commenter stated that the proposed regulations would have a negative impact on fuel diversity because of the negative impact the regulations would have on coal-fired power plants. In order to encourage fuel diversity, this commenter recommended that the Department create as open and transparent a CO_2 trading market as possible. (Electric Generation and Business Groups, Owners/Operators of Electric Generating Facilities)

Response: MassDEP believes that the response made to this issue in the April 2001 310 CMR 7.29 Response to Comments is still relevant:

> "DEP disagrees that 310 CMR 7.29, as promulgated, will threaten the reliability of the regional electric system. The cost associated with pollution prevention/pollution control is a cost of doing business. New facilities entering the energy market in New England are required to make significant investments in pollution prevention/pollution control, and it is appropriate to require investment at existing facilities to reduce their contribution to air pollution. DEP acknowledges that compliance with this regulation will result in additional operating costs. However, DEP provides significant flexibility to the affected facilities in how the facilities may choose to comply (add-on control, fuel switching, or repowering) and the time needed to plan and implement any changes undertaken to comply with the regulation.
>
> The Department also disagrees that 310 CMR 7.29 will be responsible for a decrease in fuel diversity. DEP has determined that compliance with the emission limitations in the

[3] http://www.mass.gov/dep/air/laws/finalrsn.doc
[4] http://www.mass.gov/dep/air/laws/ghgregdd.doc

regulation is technologically and economically feasible while burning coal, oil, or natural gas. Facilities are free to choose the particular fuel used at the facility or specific units.

DEP has evaluated the impact of the proposed regulations on system reliability. As stated in previous responses, the regulation can be implemented at the affected facilities without negative impacts to electric system reliability….DEP is in communication with New England ISO, and will continue to be so."

F. Cost

Comment: Some commenters stated that the cost of compliance with the CO_2 emission standards of 310 CMR 7.29 would have a minor impact on consumers and businesses, while others stated that the cost impact would be significant. One commenter concluded that, because electricity bills are a small fraction of overall costs for most of the Commonwealth's business sectors, the 7.29 rules would have a negligible impact on overall business costs. Another commenter stated that the offset trigger prices in the proposed rules "pose only a minor financial burden on the Commonwealth's most carbon-intensive power plants."

One commenter stated that the costs of complying with the Department's regulations would be passed on to consumers in the form of higher electric bills. Another commenter stated that the costs of compliance will be passed on to consumers at a higher level than predicted in the proposed regulation. On the other hand, another commenter stated that because natural gas fired generation often "sets the price" for electricity in New England, even if the costs of compliance are passed on to electricity purchasers, the costs would be insignificant.

One commenter stated that the Department's cost analysis should include a determination of when the coal-fired units affected by the regulations would be the marginal priced unit, what a resulting CO_2 credit adder would do to their costs, and their position in the dispatch order. This commenter is of the opinion that the percentage of time when a coal unit sets the marginal price will increase when the effects of a CO_2 adder are analyzed. This commenter urged the Department to minimize the cost of the CO_2 adder by expanding the geographic scope from where CO_2 offsets can be obtained, expanding the list of projects that can create CO_2 offsets, and lowering the trigger prices.

One commenter stated that the affected facilities will receive large capacity payments under the transition period before the Forward Capacity Market beginning in December 2006, which the affected facilities could use to provide a bridge to the carbon-constrained future. (Environmental and Health Advocacy Groups, Electric Generation and Business Groups, Owners/Operators of Electric Generating Facilities)

Response: The Department received a wide range of cost analyses, with our original cost estimates within the range of analyses submitted. The final regulations allow anyone to apply for GHG credits, providing more flexibility and the potential for a more robust market than the proposed regulations. This revision to the proposed regulations may result in lowering the overall cost of the program. It is not clear how the transition period or the new Forward Capacity Market will function beginning in December; for example, facilities may alter their bidding strategies in ways that make additional revenue difficult to predict. In any case, the payments under the new Forward Capacity Market are intended to encourage construction of new power plants, not other uses, such as development of or payment for GHG reductions. In addition, we note the 310 CMR 7.00: Appendix B(h) provision for auditing the regulations and program in 2010 which will provide an opportunity for adjustments, as necessary.

G. Other Regulatory Mechanisms

Comment: "The larger question is why such a complex and sophisticated program is needed to ensure compliance by a small number of plants with a mandate that will only have immediate effect on a small percentage of total emissions from a subset of those plants. The fact that the owners of the power plants

have failed to articulate how they will meet their obligations under the regulation should not mean that the Department step forward with this elaborate administrative machinery. Indeed, the procedures laid out in the proposed Appendix B(7)(e) can and should be presented in the form of regulatory guidance as a streamlined method for limited ECP amendments in order to meet the CO_2 obligations under the regulation." (CLF)

Response: As each GHG reduction, avoidance or sequestration project poses distinct technical and geographic issues, the Department does not see a way to implement the program using "limited ECP amendments." In addition, since anyone may now apply for GHG Credits, amending the ECPs of 310 CMR 7.29 affected facilities would not address projects proposed by applicants other than the affected facilities.

H. Application Fees

Comment: "[E]ntities subject to 310 CMR 7.29 would not be able to submit applications for GHG offset project certification and verification until the Department amends and promulgates such provisions in 310 CMR 4.00, along with the corresponding application forms. Therefore, should an entity subject to the GHG provisions of 310 CMR 7.29 incur a compliance obligation which requires GHG offsets to be surrendered to the Department by January 2007, it may be impossible to do so due to the inability to contract for offsets and inability to apply for offset certification." (Dominion)

Response: The Department may accept applications even without promulgated fee regulations. For example, the emission control plan applications due under 310 CMR 7.29 did not have an associated fee. Fee regulations provide the applicant with the certainty of a specific application review timeline, or the application fee is refunded. The Department has developed application forms for the certification and verification of GHG Credits, and will post these forms on the Department website at soon as possible after release of the final regulations and this Response to Comments document.

The Department agrees with the commenter that the January 30, 2007 deadline for showing compliance through use of offsets would be difficult to meet, as these regulations are being finalized in September 2006. Therefore, for compliance with calendar year 2006 requirements only, affected facilities shall demonstrate compliance with 310 CMR 7.29(5)(a)5. on or before September 1, 2007. If GHG Credits are used to demonstrate compliance, then said GHG Credits must be certified on or before September 1, 2007.

I. Alternative Compliance Payment (ACP)

Comment: "The GHG Expendable Trust Payment [should] be structured similar to the ACP mechanism of 225 CMR 14.08(4)…Facilities subject to the GHG compliance obligations of 310 CMR 7.29 and 310 CMR 7.00 should be able to discharge their obligations (in whole or in part) for any Compliance Year by making an ACP to the GHG Expendable Trust, without the need for a public hearing or permission from the Department." (Dominion)

Response: The Massachusetts Division of Energy Resources (DOER) works with the Massachusetts Technology Collaborative to ensure ACP funds are spent on appropriate renewable technologies. The Department believes there is a fundamental difference in the purposes of the DOER's ACP and the GHG Expendable Trust: that is, facilities subject to 310 CMR 7.29 have direct control over emissions of certain GHGs, whereas the entities subject to DOER's ACP must develop new renewable generation capacity. Development of GHG Credit projects is more appropriately first taken on by the entities emitting GHGs, on which the burden of compliance rests.

Attachment A. Final regulatory revisions to 310 CMR 7.00: Appendix B

Modify 310 CMR 7.00: Appendix B(1) by adding text in italics below:

APPENDIX B: U EMISSION BANKING, TRADING, AND AVERAGING
(1) Introduction. 310 CMR 7.00: Appendix B*(1) through (6)* establishes principles and procedures which can be utilized by facilities to comply with the requirements of 310 CMR 7.18, 310 CMR 7.19 and 310 CMR 7.00: Appendix A. 310 CMR 7.00: Appendix B contains provisions to allow emission averaging or "bubbles" and provisions to allow for the creation and use of emission reduction credits to be "banked", used or traded among facilities.

Add 310 CMR 7.00: Appendix B(7) to Appendix B, as follows:

(7) Greenhouse Gas Credit Banking and Trading.
(a) Introduction and statement of purpose. The goal of the program set forth in 310 CMR 7.00: Appendix B(7) is to reduce, avoid or sequester emissions of greenhouse gas (GHG) in order for affected facilities as defined in 310 CMR 7.29 ("affected facilities") to use GHG Credits for compliance with the applicable provisions of 310 CMR 7.29(5)(a)5.

(b) Definitions. The definitions in 310 CMR 7.00 apply to 310 CMR 7.00: Appendix B(7). However, the following terms have the following meanings when they appear in 310 CMR 7.00: Appendix B(7). Where a term defined in 310 CMR 7.00 definitions also appears in 310 CMR 7.00: Appendix B(7)(b), the definition in 310 CMR 7.00: Appendix B(7)(b) controls.

Additional means GHG emission reductions, avoided emissions, ~~and/~~or sequestered emissions ~~in addition to those~~ that ~~would have taken place in the absence of actions taken to reduce, avoid, or sequester GHG emissions. Emission reductions, avoided emissions, and/or sequestered emissions are not eligible for certification as GHG Credits if the actions taken to reduce, avoid, or sequester GHG emissions~~ are ~~otherwise~~ not required by local, state or federal law or regulation, or ~~if the actions are otherwise required~~ as part of a local, state or federal permit, plan, or plan approval, agreement, administrative or judicial order, or as part of an~~other~~ enforcement action (including such laws, regulations, permits, plans, plan approvals, agreements, orders or actions taken to reduce other pollutants) at the time of submittal of a certification application. A requirement to obtain a permit or plan approval under local, state, or federal law solely for the purpose of constructing, installing, or operating a voluntary emission reduction, avoided emission, or sequestered emission project shall not be considered when determining whether or not such project is additional.

Afforestation means the conversion of land that has been in a non-forested state for at least the ~~last~~ 10 years prior to the filing of an initial application for GHG Credit certification~~,~~ to a forested state.

Avoided Emissions means emissions of a GHG that do not occur and which would have otherwise occurred if not for specific ~~actions~~ projects undertaken.

Certification means the process of reviewing and conditionally approving a quantity of emission reductions, avoided emissions or sequestered emissions as GHG Credits.

Coastal Waters means the waters within the 12-mile limit pursuant to the Tariff Act of 1930 19 US~~L~~SC §1401~~1~~581.

Carbon dioxide equivalent or CO_{2e} means the weight of a quantity of a GHG multiplied by its Global Warming Potential ~~as calculated by the Intergovernmental Panel on Climate Change~~.

Energy Conservation Measure means an action that reduces demand for electricity. An Energy Conservation Measure means the installation or implementation of one or more of the following measures:

(a) the design, acquisition, and installation of projects which result in energy savings, ~~and/~~or

(b) the modification of maintenance and operating procedures in a building or facility which result in energy savings, ~~and/~~or

(c) the installation, replacement, or modification of equipment, fixtures, or materials in a building or facility which reduce energy consumption, and include, but are not limited to, modifications to windows and doors; caulking and weather-stripping, insulation; automatic energy control systems; hot water systems; equipment required to operate steam, hydraulic, and ventilation systems; plant and distribution system modifications including replacement of burners, furnaces or boilers; devices for modifying fuel openings; electrical or mechanical furnace ignition stems; utility plant system conversions; replacement or modification of lighting fixtures; and energy recovery systems.

Energy Conservation Measures do not include reductions in labor, load shifting, or measures that do not reduce energy use directly.

Enforceable means enforceable by the Department.

GHG Credit means a credit based on an amount of emission reductions, avoided emissions or sequestered emissions of a GHG. One GHG Credit has an assigned value of one ton of carbon dioxide equivalent. GHG Credits shall be expressed in whole tons. When certifying or verifying GHG Credits, the number of GHG Credits is rounded down for decimals less than 0.5 and rounded up for decimals of 0.5 or greater.

GHG Expendable Trust means the trust established pursuant to 801 CMR 50.00 for the purpose of providing a separate segregated interest-bearing account for the receipt of payments made pursuant to 310 CMR 7.00: Appendix B(7)(d)5.

GHG Registry means the database of Massachusetts GHG Credits that have been certified, verified, voided or used.

Global Warming Potential or GWP means the ratio of the global heat trapping effect, direct and indirect, of one mass unit of a gas to that of the same mass unit of carbon dioxide over 100 years~~a given period of time~~. ~~The most recent list of GHG GWPs maintained by the Intergovernmental Panel on Climate Change (IPCC), which utilizes a 100-year period, as amended by the IPCC from time to time, will be utilized by the Department i~~In implementing 310 CMR 7.00: Appendix B(7), the Department shall utilize the GHG GWPs, as published by the Intergovernmental Panel on Climate Change (IPCC), at the time of submittal of a certification application.

Greenhouse Gas or GHG means any of the gases for which a GWP is listed by the Intergovernmental Panel on Climate Change.

Leakage means displacement of reduced, avoided, or sequestered GHG emissions to an area or location outside of the boundary of a project which reduced, avoided or sequestered the GHG emissions.

~~**GHG Registry** means the database of Massachusetts GHG Credits that have been certified, verified, voided and/or used.~~
Permanent means that GHG emission reductions, avoided emissions, or sequestered emissions implemented for the purpose of generating GHG Credits must be assured for the life of the corresponding GHG Credits.

Real ~~reduction~~ means actual~~the reduction in actual emissions released into the air or the reduction in actual emissions that would have occurred if a project had not taken place~~.

Renewable Energy Generation Measure means an energy supply-side measure using sources that are essentially inexhaustible or regenerative. Renewable sources of energy include, but are not limited to, wood, geothermal, wind, photovoltaic and solar thermal energy.

Sequestered Emissions means carbon that has successfully been captured and securely stored that would have otherwise been emitted to or remained in the atmosphere.

Verifiable means that emission reductions, avoided emissions or sequestered emissions can be determined through replicable (as defined in 310 CMR 7.00: Appendix B(2)) methods which are acceptable to the Department.

Verification means the process of determining the extent to which certified GHG emission reductions, avoided emissions ~~and/~~or sequestered emissions actually occurred.

(c) Applicability.

1. Entry into this GHG Banking and Trading Program is voluntary.

2. 310 CMR 7.00: Appendix B(7) applies to affected facilities and any other person applying for certification ~~and/~~or verification of GHG Credits.

3. GHG Credits certified ~~and/~~or verified under this regulation may only be used to satisfy the requirements of 310 CMR 7.29(5)(a)5.

4. Applications for certification ~~and/~~or verification of GHG Credits may ~~only~~ be submitted by ~~an affected facility~~any person.

(d) ~~Generation~~ Creation of GHG Credits.

1. GHG Credits may ~~consist of~~be created by projects which reduce emissions, avoid emissions, or sequester emissions.~~emission reductions, avoided emissions, and/or sequestered emissions that are generated by any of the following: stationary, area and mobile sources; renewable energy generation measures; and energy conservation measures.~~ Examples include, but are not limited to: landfill gas combustion; sulfur hexafluoride (SF_6) capture; afforestation; natural gas, oil and propane end-use efficiency; ~~and~~ methane capture from farming operations; stationary, area and mobile source projects; renewable energy projects; and energy conservation measures.

2. The following are not eligible for certification as GHG Credits: nuclear power generation, under-water and under-ground sequestration, and over-compliance with the cap and rate limitations in 310 CMR 7.29 by affected facilities.

3. Except as allowed pursuant to 310 CMR 7.00: Appendix B(7)(d)4, e~~E~~mission reduction~~s~~, avoided emission~~s~~ ~~and/~~or sequestered emission~~s~~ projects shall be ~~generated~~ located within the geographic limits of Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, ~~Rhode Island,~~ Vermont, or the coastal waters thereof, or a United States jurisdiction that has a carbon constraining program approved by the Department under 310 CMR 7.00: Appendix B(7). The Department ~~will~~ shall maintain a list of approved carbon constraining programs or portions thereof.

4. Offset Trigger Price

a. The Department shall establish an offset trigger price for each calendar year. The offset trigger price for calendar year 2006 shall be $6.50 per ton of CO_{2e}. For each calendar year after 2006, until such time as the offset trigger price is exceeded, the Department shall publish the new offset trigger price by January 31, which shall be equal to the previous year's offset trigger price adjusted up or down according to the previous year's Consumer Price Index.

b. By February 15 of each year, the Department shall determine whether the offset trigger price for the previous calendar year was exceeded, or whether there are insufficient GHG Credits available for purchase at or below the offset trigger price for the previous calendar year in the geographic region specified in 310 CMR 7.00: Appendix B(7)(d)3~~average calendar year price of GHG Credits or of applied-for GHG Credits for the previous year exceeds the offset trigger price for that previous year, or whether there are insufficient GHG Credits available for purchase at or below the offset trigger price for that previous year, in the geographic region specified in 310 CMR 7.00: Appendix B(7)(d)3~~. In determining whether the offset trigger price for the previous calendar year was exceeded, the Department may consider the average calendar year price of GHG Credits or of applied-for GHG Credits for the previous year, or any other relevant information.

c. Notwithstanding 310 CMR 7.00: Appendix B(7)(d)3., if the Department determines that the ~~average calendar year price of GHG Credits or of applied-for GHG Credits for the previous year exceeds the~~ offset trigger price for the~~at~~ previous calendar year was exceeded, or that there are insufficient GHG Credits available for purchase at or below the offset trigger price for the~~at~~ previous calendar year in the geographic region specified in 310 CMR 7.00: Appendix B(7)(d)3., then, for all subsequent years, ~~affected facilities~~applicants may apply for certification and verification of projects that occur anywhere on Earth, and certification and verification of CO_2 allowances and CO_{2e} credits from any ~~Department-approved~~ allowance or credit system. ~~The Department shall maintain a list of approved systems.~~

5. Trust Trigger Price

a. The Department shall establish a trust trigger price for each calendar year. The trust trigger price for calendar year 2006 shall be $10.00 per ton of CO_{2e}. For each calendar year after 2006, the Department shall publish the new trust trigger price by January 31, which shall be equal to the previous year's trust trigger price adjusted up or down according to the previous year's Consumer Price Index plus 2%.

b. By February 15 of each year, the Department shall determine whether the trust trigger price for the previous calendar year was exceeded~~previous calendar year's average price~~

~~of GHG Credits, of applied-for GHG Credits, or of projects paid for by the GHG Expendable Trust exceeds the trust trigger price for that previous year~~. In making this determination, the Department may consider the average calendar year price of GHG Credits, of applied-for GHG Credits, or of projects funded or credits or allowances purchased by the GHG Expendable Trust for the previous year, or any other relevant information.

c. Notwithstanding 310 CMR 7.00: Appendix B(7)(d)3. and 4., if the Department determines that the trust trigger price for the previous calendar year was exceeded~~average calendar year price of GHG Credits, average calendar year price of applied-for GHG Credits, and average calendar year price of projects paid for by the GHG Expendable Trust for the previous year exceed the trust trigger price for that previous year~~, then, to demonstrate~~for~~ compliance with the~~at~~ current calendar year's CO_2 limits, ~~applicants~~ affected facilities may pay ~~the trust trigger price~~ into the GHG Expendable Trust at the price established pursuant to 310 CMR 7.00: Appendix B(7)(d)5.a. to offset all or a portion of emissions above the historical actual emissions or excess emissions pursuant to 310 CMR 7.29(5)(a)5.c. and d., so that a combination of GHG Credits and payments into the GHG Expendable Trust equals emissions above historical actual emissions plus excess emissions.

6. Notwithstanding 310 CMR 7.00: Appendix B(7)(d)3., 4., and 5., if, at any time prior to January 1, 2009, the Commissioner determines that the price of GHG Credits or of applied-for GHG Credits substantially exceeds either of the price thresholds established in 310 CMR 7.00: Appendix B(7)(d)4. or 5., or if insufficient ~~certifiable applications for~~ GHG Credits are ~~submitted~~available, then the Commissioner may, after public notice in the Environmental Monitor, and an opportunity for public comment, expand the geographic scope or allow payments into the GHG Expendable Trust at the rate set forth in 310 CMR 7.00: Appendix B(7)(d)5. This provision shall have no effect on and after January 1, 2009.

7. In order to be certified ~~and/~~or verified as GHG Credits pursuant to 310 CMR 7.00: Appendix B(7), emission reductions, avoided emissions, ~~and/~~or sequestered emissions shall be real, additional, verifiable, permanent, and enforceable ~~as a practical matter~~ and occur on or after January 1, 2006.

8. In the case of sequestered emissions, in order for a GHG Credit to be permanent, the owner shall, at a minimum, place the land within the sequestration project boundary under a legally binding instrument, acceptable to the Department, such that the sequestered emissions remain captured and securely stored in perpetuity.

9~~8~~. In order to be certified ~~and/~~or verified as GHG Credits pursuant to 310 CMR 7.00: Appendix B(7), emission reductions, avoided emissions, ~~and/~~or sequestered emissions shall be generated only by projects built and generating energy (in the case of certain avoided emissions), or built and in use, or installed and operational (in the case of emission reductions or sequestered emissions) ~~by~~ on or after January 1, 2006.

~~9. In order to be certified and/or verified as GHG Credits pursuant to 310 CMR 7.00: Appendix B(7), emission reductions, avoided emissions, and/or sequestered emissions shall be permanent to the maximum extent feasible.~~

(e) Procedure For Certification and Verification of Emission Reductions, Avoided Emissions, ~~and/~~or Sequestered Emissions as GHG Credit.

1. An application for certification of GHG Credit may be submitted to the Department in advance of the time when the emission reduction, avoided emission, ~~and/~~or sequestered emission actually occurs (prospective certification) or after the emission reduction, avoided emission, ~~and/~~or sequestered emission has actually occurred (retrospective certification).

2. In order for a GHG Credit to be eligible for verification, a~~A~~n application for verification of GHG Credit ~~may~~ shall be submitted to the Department ~~anytime~~ within two calendar years after the end of the calendar year in which the emission reduction, avoided emission, ~~and/~~or sequestered emission actually occurred. Applicants may apply for verification a maximum of two times per calendar year per approved certification.

3. For project-based emission reductions, avoided emissions, ~~and/~~or sequestered emissions, only those projects which generate an annual average over the period applied for of 5,000 or more tons CO_{2e}, as calculated under 310 CMR 7.00: Appendix B(7)(d), are eligible to be certified as GHG Credits.

4. Application Procedures for projects.

a. Applications are required for certification and verification of GHG Credits from emissions reduction, avoided emission and sequestration projects.

b. The GHG Credit application shall be submitted on a form supplied by the Department and shall include but not be limited to: a complete description of the project~~,~~; a quantification protocol that details the calculation method for the quantification of pre- and post-project emissions for emission reductions; quantity of avoided emissions; or quantity of sequestered emissions, and a proposed method for determining, monitoring and assuring compliance.

c. GHG Credit applications shall express emission reductions, avoided emissions, and or sequestered emissions in whole tons of CO_{2e}. When certifying or verifying GHG Credits, the number of GHG Credits is rounded down for decimals less than 0.5 and rounded up for decimals of 0.5 or greater.

d. GHG Credit applications shall contain sufficient information to allow the Department to evaluate each emission reduction, avoided emission ~~and/~~or sequestered emission consistent with the requirements of 310 CMR 7.00: Appendix B(7). Where applicable, the applicant shall specify the best management practice used to determine an emissions baseline.

e. GHG Credit applications shall be submitted by and bear the signature of a responsible official having the legal authority to bind the applicant ~~legally responsible official from the affected facility submitting the application~~.

f. GHG Credit applications shall comply with provisions of 310 CMR 4.00 et seq. for fees and permit procedures as applicable.

g. Concurrent participation in other registries and certification programs.

i. If an applicant has submitted information relative to the emission reductions, avoided emissions, or sequestered emissions for which the applicant is seeking

certification under Appendix B(7) to any other certification system, registry or inventory, then the applicant shall submit a copy of such information with its application for certification of GHG Credit in Massachusetts. The applicant shall state the status of its submittal to such other certification system, registry or inventory.

ii. If an applicant for GHG Credit fails to comply with 310 CMR 7.00: Appendix B(7)(e)4.g.i., then the Department may deny any GHG Credit applied for and void any GHG Credits that may have been approved. GHG Credits shall be voided in cases where the GHG Credit is found to have been used for a purpose other than those specified in 310 CMR 7.00: Appendix B(7).

h. GHG Credit certification and verification applications shall contain a description of potential project leakage, and describe how such leakage was or will be monitored and avoided. The Department shall void GHG Credits to the extent of any leakage that has been identified.

i. GHG Credit applications shall document the negotiated or anticipated price ~~paid by the applicant~~ per ton of ~~CO_{2e}~~ GHG Credit applied for.

5. Applications for GHG Credits from other carbon constraining programs.

a. The Department may approve allowances or credits from any carbon constraining program as GHG Credits, provided that the Department determines such program or portion thereof has procedures in place to ensure allowances or credits are real, additional, verifiable, permanent ~~to the maximum extent feasible~~ and enforceable ~~as a practical matter~~. The Department shall maintain a list of approved programs.

b. The application shall be submitted on a form supplied by the Department and shall include, but not be limited to: a complete description of the project or program as applicable; relevant laws, regulations, policies, and guidelines; and such other information as the Department deems necessary to make a determination pursuant to 310 CMR 7.00: Appendix B(7)(e)5.

6. Conditions of GHG Credit Certification and Verification Approvals

a. The Department may approve, approve with conditions, or deny GHG Credit applications.

b. The Department may require applicants to implement compliance assurance methods such as testing, monitoring, recordkeeping and reporting as part of the GHG Credit certification and verification approval.

c. The Department may consider scientific uncertainty and the extent to which a project may be harmful to the environment or public health when certifying or verifying GHG Credits.

(f) Public participation procedures for GHG Credit certification and verification applications pursuant to 310 CMR 7:00: Appendix B(7)

1. The Department ~~will~~ shall publish, at the applicant's expense, a notice of public comment on a ~~draft~~ proposed approval, conditional approval, or disapproval. The Department will allow a 30-day public comment period following publication of the notice, and may hold a public hearing. After the close of the public comment period, the Department will issue a final decision.

2. 310 CMR 7.00: Appendix B(7)(~~g~~f) shall apply to applications for GHG Credit pursuant to this section, instead of the procedures under 310 CMR 7.00: Appendix B(6).

(g) Use and Purchase of GHG Credits.

1. To the extent that ~~A~~affected facilities ~~may~~ use GHG Credits to comply with 310 CMR 7.29(5)(a)5., only GHG Credits~~certified~~ verified under 310 CMR 7.00: Appendix B(7) may be used~~to comply with 310 CMR 7.29(5)(a)5.~~, except as allowed by 310 CMR 7.00: Appendix B(7)(g)2.

2. Affected facilities may use GHG Credits certified in calendar years 2006 and 2007 to meet any compliance obligation under 310 CMR 7.29(5)(a)5. for those years, provided that such GHG Credits are verified by December 31, 2008. If any certified GHG Credits which were used for calendar year 2006 or 2007 compliance with 310 CMR 7.29 are not verified by December 31, 2008 due to leakage or any other reason, the affected facility using the certified GHG Credits shall provide an equivalent amount of valid GHG Credits in the 310 CMR 7.29 calendar year 2008 report due January 30, 2009. Notwithstanding 310 CMR 7.29(7), for calendar year 2006 only, affected facilities shall demonstrate compliance with 310 CMR 7.29(5)(a)5. on or before September 1, 2007. If GHG Credits are used to demonstrate compliance, then said GHG Credits must be certified on or before September 1, 2007.

3. GHG Credits that have been used to satisfy any GHG liability or requirement other than 310 CMR 7.29, with the exception of requirements to disclose environmental and other attributes of electricity generation, shall not be eligible for use to comply with the requirements of 310 CMR 7.29.

4. Any ~~affected facility~~ person who~~ich~~ purchases a GHG ~~c~~Credit from any source shall report the price paid per GHG ~~c~~Credit to the Department within 30 days of purchase.

5. Once the Department approves an allowance or credit program or portion thereof pursuant to 310 CMR 7.00: Appendix B(7)(e)5.a., an affected facility may demonstrate compliance with the CO_2 provisions of 310 CMR 7.29 by demonstrating in the 310 CMR 7.29 compliance report due by January 30 of each year, or by September 1, 2007 as allowed in 310 CMR 7.00: Appendix B(7)(g)2., that such allowances or credits have been retired for compliance with 310 CMR 7.29(5)(a)5. and by reporting the price paid for such allowances or credits.

6. Nothing in 310 CMR 7.00: Appendix B(7) or 310 CMR 7.29 (5)(a)5. shall be construed to limit the authority of the Department to terminate, void, or limit GHG Credits that have been certified or verified.

7. If the Department determines that any emission reductions, avoided emissions, or sequestered emissions used to generate GHG Credits are not real, additional, verifiable, permanent, or enforceable as defined in 310 CMR 7.00: Appendix B(7)(b), such GHG Credits shall become void.

8. Any affected facility using voided GHG Credits shall replace the voided GHG Credits with an equivalent amount of valid GHG Credits and shall demonstrate compliance with this provision within one year of the date that the Department determines that such GHG Credits are void.

9. For purposes of 310 CMR 7.00: Appendix B(7), violations of the requirements herein may be enforced against the affected facility, any person who applied for certification or verification of GHG Credits, or any combination thereof. Nothing herein shall limit the ability of the Department to take enforcement action for violations of 310 CMR 7.29 or 310 CMR 7.00: Appendix B(7).

(h) Program review.

1. The Department shall conduct a review of the GHG emission trading program beginning in 2010 and every five years thereafter. This review shall evaluate the reduction of CO_2 emissions, handling of applications for GHG Credit approval, and the use of approved GHG Credits, and may include review of GHG Credit creation and use protocols, and compliance assessment of sources using GHG Credit. The program review may also include assessment of the impact of the program on New England Governors/Eastern Canadian Premiers Climate Change Action Plan milestones.

2. The Department may propose the appropriate program revisions pursuant to Chapter 30A administrative procedures based upon program review.

Attachment B. Final regulatory revisions to 310 CMR 7.29

Modify 310 CMR 7.29 by adding text in italics and deleting text in strikethroughs below:

310 CMR 7.29(2) Definitions.

~~Off-site Reduction means reductions of carbon dioxide, including, but not limited to, carbon sequestration measures, shutdown of carbon dioxide sources, or renewable energy generation measures listed in 40 CFR Part 73 Subpart F Appendix A 3. Reductions shall be approved by the Department through quantification methodologies equivalent to quantification methodologies contained in 310 CMR 7.00: Appendix B(3).~~

~~Sequestration means the uptake and long-term storage of carbon in the biosphere, underground, or the oceans so that the buildup of carbon dioxide concentration in the atmosphere will be reduced or slowed.~~

310 CMR 7.29(5)(a)5. Carbon Dioxide Emission Standards.

c. Compliance with 310 CMR 7.29(5)(a)5.a. may be demonstrated by using ~~offsite~~ *emission* reductions, *avoided emissions* or sequest*ered emissions*~~ration~~ *verified under 310 CMR 7.00: Appendix B(7)* to offset emissions above the historical actual emissions, provided the Department determines such *emission* reductions, *avoided emissions* or sequest*ered emissions*~~ration~~ are real, *additional*~~surplus~~, verifiable, permanent ~~*to the maximum extent feasible*~~, and enforceable as defined in 310 CMR 7.00: Appendix B(7) or by using the GHG Expendable Trust under the conditions specified in 310 CMR 7.00: Appendix B(7)(d)5 ~~*as a practical matter*~~, as defined at 310 CMR 7.00: ~~*Appendix B*~~.

d. Compliance with 310 CMR 7.29(5)(a)5.b. may be demonstrated by using ~~off-site~~*emission* reductions, *avoided emissions* or sequest*ered emissions*~~ration~~ *verified under 310 CMR 7.00: Appendix B(7)* to offset excess emissions, provided the Department determines such ~~offsite~~ *emission* reductions, *avoided emissions* or sequest*ered emissions*~~ration~~ are real, *additional*~~surplus~~, verifiable, permanent ~~*to the maximum extent feasible*~~, and enforceable as defined in 310 CMR 7.00: Appendix B(7) or by using the GHG Expendable Trust under the conditions specified in 310 CMR 7.00: Appendix B(7)(d)5 ~~*as a practical matter*~~, as defined at 310 CMR 7.00: ~~*Appendix B*~~. Excess emissions are any emissions above the net electrical output of the facility times 1800 lbs./MWh.

Attachment C. List of Commenters

Below please find a list of the individuals and organizations that submitted comments or testified at any of the five public hearings for 310 CMR 7.00: Appendix B and 310 CMR 7.29 GHG amendments.

Environmental and Health Advocacy Groups
Boston Climate Action Network
Brandeis University Students for Environmental Action
Campaign to Clean Up Brayton Point Power Plant
Cape Clean Air
Canal Citizens for Clean Energy
Center for Health and the Global Environment, Harvard Medical School
Clean Air Task Force
Clean Power Now
Clean Water Action
Clean Water Alliance
Climate Campaign, Tufts University
Coalition for Social Justice
Conservation Law Foundation
Environmental Entrepreneurs (E2)
Fall River Garden Club
Grace Episcopal Church, Amherst
Green Decade of Cambridge
Green Futures
HealthLink
League of Women Voters of Falmouth
MASSPIRG
MASSPIRG, Holyoke Community College Student Chapter
MASSPIRG, Salem State College Student Chapter
Massachusetts Climate Action Network
Massachusetts Interfaith Power and Light
Northampton Citizens for Climate Protection
Northampton High School Environmental Club
Ocean Alliance
Physicians for Social Responsibility of Greater Boston
Sierra Club - Essex County Group
Sierra Club, Massachusetts Chapter
Somerville Climate Action
Sustainable Belmont
Toxics Action Center
Union of Concerned Scientists
Unitarian Universalist Ministry for Earth
We Love Children Organization, Inc.
Williamstown COOL Committee

Electric Generation and Business Advocacy Groups
ABC Disposal Service
A & D Hydro, Inc.
Associated Industries of Massachusetts
Blue Source, LLC
Climate Trust

Commonwealth Resource Management Corp.
EcoSecurities, Ltd.
Edison Electric Institute
Egan Environmental, Inc.
Energy Federation, Inc.
Entergy Nuclear Generation Company, LLC
Entergy Nuclear Operations, Inc.
Fall River Area Chamber of Commerce
International Brotherhood of Electrical Workers, Local 326
New England Council
New England Energy Alliance
New England Power Generators Association
North Shore Chamber of Commerce
Northeast Sustainable Energy Association
Nuclear Energy Institute
Retailers Association of Massachusetts
Ridgewood Power Management, LLC
Salem Chamber of Commerce
Salem Harbor Alliance for Reliable Energy
Salem Partnership
Utility Solid Waste Activities Group
Waste Management
Ze-gen, Inc.

Owners/Operators of Electric Generating Facilities
Dominion Energy
NRG Energy, Inc.
Northeast Generation Services Company

Local and State Elected Officials

Anne Awad	Chair, Select Board of Amherst
Robert Bradford	North Shore Chamber of Commerce
Kim Driscoll	Mayor of Salem
Eleanor L. Gagnon	Somerset Board of Selectmen
Representative Raymond E. Gallison, Jr.	Deputy Majority Leader, Rhode Island House of Representatives
Alex Grimes	Office of Senate Majority Leader Frederick Berry
Representative Patricia A. Haddad	5th Bristol District
Representative John D. Keenan	7th Essex District
Senator Joan M. Menard	1st Bristol and Plymouth District
Leonard F. O'Leary	Salem City Council, Ward 4
Rinus Oosthoek	Salem Chamber of Commerce
Jean Pelletier	Salem City Council President
Representative Douglas W. Petersen	8th Essex District
Thomas F. Reilly	Attorney General, Commonwealth of Massachusetts

Private Citizens

Kristine Acevedo
Norma Adler
Alison Adler
Mike Agosti
Gillam Ahn
Maura Albert
Simon P. Alciere
Gabriel Alfieri
Daurisss Allard
Dorothy Allen
June E. Allen
Scott Allen Hershowitz
Richard Ambos
Rosalie Anders
John R Anderson
Constance Anderson
Liz Argo
Jessica Arnett
Rebecca Arnoldi
Nancy F. Arons, LICSW
Jean Ashland
Jodie Austin Waller
Cheryl Azza
Judith M Babb
Rebecca Backman
Helen H Bacon
Virginia R Bailey
Jean C Baker
Karen Baker
Desiree Ball
Sara Ballard
Rodney M Barker
Claire L Bateman
Jonathan Bates
Scott Battles
Sharon Bauer
Nancy Beach
Sarah Beard
Chris Beattie
Patricia Beckett
Katherine Beer
Joseph Belisle
Stephen Beltramini
Cherry Bennett
William Berchen
Louis Bernieri
Jill Bernstein
Joshua Bernstein
Cheryl Bible
Jennifer Bieber
Mike Blackwell
Erika Bloom
Michelle Bouche
Julia A Boudreau
Erich Bouthillette
Charlotte Boutillette
Janet M Bowers
Susan O. Bowman
Tad Bradley
Gerry Brauninger
Stefanie Bray
Sean Brennan
Kevin Breunig
Ann Brewster Weeks, Esq.
Marion Briggs
Lorraine D Brisson
Charlene R Brotman
Charles Brown
Robert Brunelli
Ellen H G Bryant Warren
Vera Buchanan
Bob Budd
Jennifer Budryk
Mr. Michael Burke
Linda Burlak
Virginia Burns
Dorothy Busiek
Gerriann Butler
Timothy Butler
Steven Byler
Marie A Cacciola
Margaret Cain
Ulle Caithe
Moses Calouro
Roberta Cameron
Marilyn Campbell
Linda Candage
Carl Canner
Cynthia Capone
Deborah Carey
Roger Carney
Bonnie Caron
Suzanna Caron
Richard B Carpenter
Phyllis M Carr
Michael Carr
Louis Carreras
Roger Cartwright
Juliet Carvajal
Thomas Catalano
Susan Cervantes
Cynthia Chace-Macniel
Rose Chaffee
Valeria Chambers
Priscilla Chapman
Rick Charnes
Edmond Charrette
Susanna Chivian
Sacha Christianson
D Onalie Chrobak
Sherri L Clare
Carol Clarke
Sam Clement
Maryann Coda
Elizabeth Coe
Richard Coe
Nancy Coffey
Tammis Coffin
Betsey Cogswell
Raili Cohen
Rebecca Cohen
Russ Cohen
Ron Coler
Robert P Comer
William R Compton
John Cone
Sherrill Conna
Prof. Helen M. Conrad
Nicholas Conte
Barbara Convery
Anneke Corbett
Suzanne Costanza
Jeffrey Coulson
Madonna Cournoyer
Victor I Covaleski
John Crankshaw
James J Cummings
Jeff Cunningham
John Curcio
Trina Cysz
Vincent Da Forno
Ryan Daley
Kathleen M Dalton
Derek Davies
Elizabeth K Day
Deborah De Bastiani Dc
David Dearborn
Oliver Deex
Stephen Deffley
Peter Dekant

Erhart Demand
Sonia DeMarta
Cheryl Denis
Karen Dervin
Vithal Deshpande
Arlene Devlin
Lucy DeWolf
Chris Digan
Dena F Dincauze
Debbie Dittmer
Rick Donahue
Susan Donohoe
H J Dorris
Kelly Dorsey
Timothy Dow
Andreae Downs
Bernard R Doyon
Naomi R. Dreeben
Katya Dreyer-Oren
Tim Driscoll
Walter Ducharme
Andrea Dulberger
Charles Dunham
Jeremy Dunn
Paul Dupuis
Charles Durney
Mark Dyer
Carol Dyer
Melvene Dyer-Bennet
Erik Dykema
Marcia Eagleson
Katherine Eanes
Judith Egan
Lori A. Ehrlich, CPA, MPA
Vicki Elson
Nancy Elster
Susan Elwyn
Judith Embry
Steven Engler
Christina Everett
Alan Ewald
Marjorie Ewing
Jeffrey Eyges
Roger A Falcon
Andrew Falender
Charles Farrell
Christine Farrell-Riley
Michael Faucher
Nicole C Faulkner
Tom Fedak
Hayyim Feldman
David Ferland
Joe Fiacco
Geoffroy Fijal
Leeman Fitzgerald
Lisa Fleischman
Li Fran
Myra Franks Mac Leod
Stan Franzeen
Michael Fratto
H Susan Freireich
Robert French
Nicole Friederichs
Dagmar Friedman
Diane Friedman
Marc A. Frigon
Edith Fuller
Laurie Gabriel
Deborah Galef
Kristen Galfetti
Sarah Gant
Robert W Gardiner
Lynn Gargill
John Gau
Eeva-Liisa Gehring
Erik Gehring
John Gehring
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Nikole L Gilbert
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Jean Grossholtz
Lois Grossman
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Linda Haley
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Carolyn E. Hannauer
John Hanold
Ronald Hansen
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Tom Harrington
John Harvey
Bruce Hawkins
Adam Hayes
Mr. Clarke Haywood
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Margaret Hepler
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Eliza R Hewat
Bill Hewitt
Cynthia Hibberd
Catherine Hinard
Susan E Hine
Marcia Hix
Mary Hocken
Elizabeth A Hodges
Lynn Hoefgen
Erik Hoffner
C. Colin Hollister
Rev. James Hornsby
Sharone Horowit-Hendler
Shel Horowitz
Shaked Hoter
Beth Howard
Wendy Huber
Clayton P Hudson
Thomas R Hughes
John B Humphrey
Iona Hunedy
Dylan Hunter
Patricia Hurzeler
Philip Hurzeler
Christine Hutchins
David Hutto
Teegrey Iannuzzi
Ann M Igoe

Nicole Jabaily
Kent Jackson
Al Jacobson
Abigail Jenks
Patricia Jennings
Michelle Johnson
Peggy L Johnson
Laura Johnson
Rebecca Johnston
Robert A. Jonas
Ileana Jones
Jenny Jones
T. Stephen Jones, M.D.
Dolores Jordan
Philip C. Joyce
Dave Judelson
Eugene Jura
Tom Kafka
Jan Kaiser
Edna Kaplan
Josh Katzman
Allen Katzoff
Edward Kaunelis
Charlene Kaye
Ann Kearns
Seth Kellogg
Ann Kendall
Ellen Kennedy
Jean Keskulla
Gretchen Kibbe
Anita King
John-Miller King
Dusty King
Deb Klein
Philip Knowles
Trish Kochka
Bill Kopetchny
Bobbi Kovner
Joyce Kreider
George Kriebel
Rhoda Kubrick
Benjamin Kuss
Robert J. Kvaal
Rosemary Kverek
Traci Lander
George M Lane
Doug Langenberg
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Linda Larson
Paul Lauenstein
Annie Laurie
David Lavallee
David Lawless
William Lawless
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Andrea Leary
Kathryn Leary
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Christopher Moran
Mary Morrison
Anne Moseley
Julie Mountain
Marilyn Mullane

Denise Mumley
Terry Murphy
Anne Murrock
Margaret Nairn
John Nelson
Julie Nelson
Nancy Nolan
A Norman
Justin Nye
Anne Nyman
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Karen O'Connell
Kate O'Connor
John Ofria
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Keith Ohmart
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Peter Oliver
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Sophie Rapaport
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Michelle Reid
Tim Reilly
Heidi Reilly
Mary Reilly
Paul Reilly
Hank Reisner
Douglas W. Renick
Emily Restivo
Janet M Rice
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Marie K. Richardson
Katherine Richmond
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Howard Rife
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Garth Shaneyfelt
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Deborah Sharpe
Rosemary Shaw
Brendan Shea
Philip Sheltry
Anna Shenk
David Sheppard
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Miller Shropshire
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Lynn Shyevitch
William Siegel, MD
Richard Siewert
Elisabeth Sigman Somerset
Pat Sikora
Marilyn Silberglied
Emily Silver
Elizabeth V Simon
Kimball T. Simpson
Dade Singapuri
Helaina Skop
Sara S Slater
Cheryl Slowik
Theodore Slutz
Laura Smeaton
Michael Smith
Kathryn K Smith
Andrew & Karin Smith

Donald Smith
Marina Solomon
Phyl Solomon
William Spademan
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Kathy Spellman
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Vincent Turano
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Peter Waasdorp
Leslie R Wadsworth
Richard Waldma M D
Melissa Warren
Michele M Waters
Peter Watkinson
Gary Watson
Jill Watts
Thomas Weiner
Emilie Welles
Jenna Wells
Martha Werler
Eileen Wheeler Sheehan
Gwen Whelan
Marion Whitaker
Peter White
Dw Wiegand
Peter Wildermuth
Keitheley Wilkinson
C.E. Wilkinson
Joan S Wilson
Margaret D. Wineman
Robert J. Wineman
Carol Wintle
Teresa Wise
LC Withington
Esther Wolk
Maria Wood
Emilie Woodward
Steve Woodward
Mary Ann Wordell
Julie Wormser
Phoebe Wray
Julie Wright
Tracey Wright
Susan Yochelson
Terre D Young
Colleen